

Petition No. 2011-

Petitioner: Charlotte-Mecklenburg Storm Water Services

**AN ORDINANCE AMENDING APPENDIX A  
OF THE CITY CODE –ZONING ORDINANCE**

**ORDINANCE NO.**

**BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CHARLOTTE:**

Section 1. Appendix A, "Zoning" of the Code of the City of Charlotte is hereby amended as follows:

A. CHAPTER 10: OVERLAY DISTRICTS

1. PART 5: MOUNTAIN ISLAND LAKE WATERSHED OVERLAY

- a. Amend Section 10.508, "Buffer Areas Required", subsection (3), "Additional buffer requirements", subsection (a) and subsection (b) by removing existing language pertaining to County Environmental Protection Department and adding language referring to Charlotte-Mecklenburg Storm Water Services. The remaining subsection (3) shall remain unchanged. The revised text shall read as follows:

**Section 10.508. Buffer Areas Required.**

Vegetative buffers are required along the shoreline of Mountain Island Lake measured from the normal pool elevation and along all perennial streams measured from the bank on each side of the stream.

- 1. Critical Areas. In the CA1, CA2, CA3 and CA4 sub areas the minimum buffer areas are as follows:
  - (a) All areas adjacent to normal pool elevation of Mountain Island Lake - 100 feet
  - (b) All areas adjacent to perennial streams - 100 ft. or 100 year flood plain, whichever is greater
- 2. Protected Areas. In the PA1 and PA2 sub areas the minimum buffer areas are as follows:
  - (a) All areas adjacent to perennial streams in the PA1 sub area:
    - 1. low density option - 50'
    - 2. high density option - 100'

(b) All areas adjacent to perennial streams in the PA2 sub area:

1. low density option - 30'
2. high density option - 100'

(c) Buffer areas are not required in the PA3 sub area

3. Additional buffer requirements:

No permanent structures, built upon areas, septic tanks systems or any other disturbance of existing vegetation shall be allowed within the buffer except as follows:

- a. No trees larger than 2-inch caliper are to be removed except for dead or diseased trees. Trees less than 2 inch caliper and undergrowth may be removed to be replaced by an effective stabilization and filtering ground cover based upon the "Watershed Buffer Guidelines for Mecklenburg County" contained in Appendix 5 and as approved by the ~~County Environmental Protection Department~~ Charlotte-Mecklenburg Storm Water Services.  
(Petition No. 2001-130, § 10.508(3)(a), 11-19-01)
- b. Stream bank or shoreline stabilization is allowed as approved on a plan submitted to the applicable Engineering Department and the ~~County Environmental Protection Department~~ Charlotte-Mecklenburg Storm Water Services.
- c. Water dependent structures and public projects such as road crossings and greenway paths are allowed where no practical alternative exists. These activities should minimize built-upon surface area, direct run off away from surface waters, and maximize the utilization of nonstructural BMP's and pervious materials.
- d. During new development or the expansion of existing development the City of Charlotte can require enhancement of the existing vegetation in the buffer if necessary so that the buffer can effectively perform its filtering and absorption functions based on the "Watershed Buffer Guidelines for Mecklenburg County" contained in Appendix 5.  
(Petition No. 2001-130, § 10.508(3)(d), 11-19-01)
- e. In the PA1 and PA2 sub areas, non-impervious

recreational development and non-impervious pedestrian trails may be allowed in the required buffer if located a minimum of 30' from the stream bank.

- b. Amend Section 10.509, "High Density Option" by removing existing language "Mecklenburg" from Charlotte-Mecklenburg Land Development Standards Manual. Amend subsection (2), "Structural BMP's" by removing existing language pertaining to the North Carolina Division of Water Quality, adding language referring to the Charlotte-Mecklenburg BMP Design Manual and removing existing language "Mecklenburg" from Charlotte-Mecklenburg Land Development Standards Manual. Amend subsection (3), "Installation of Structural BMP's" by removing existing language pertaining to the Environmental Protection Department. Amend subsection (4), "Maintenance Responsibility of Structural BMP's" by removing existing language "Mecklenburg" from Charlotte-Mecklenburg Land Development Standards Manual. The remaining Section 10.509 shall remain unchanged. The revised text shall read as follows:

**Section 10.509. High Density Option.**

The High Density Option allows for a greater development density provided engineered controls (Structural BMP's) are used to manage storm water runoff. Structural BMP's are required under the High Density Option. High density development shall meet the requirements of this section, the Charlotte-Mecklenburg Land Development Standards Manual and other published standards of the City Engineering Department.

1. High Density Permit Application.
  - A. A High Density Development Permit shall be required for new development exceeding the requirements of the low density option.
  - B. Application for a High Density Development Permit shall be submitted as follows:
    1. Development plans subject to the Subdivision Ordinance and the Sediment and Erosion Control Ordinance and reviewed through the Charlotte-Mecklenburg Planning Commission will submit the High Density Development Permit to the Subdivision Administrator as part of the subdivision review application process.
    2. Development plans not subject to the Subdivision Ordinance will submit the High Density Development Permit to the City

Engineer as part of the Sediment and Erosion Control requirements of the building permit application process.

3. Applications for the High Density Option shall be made on the proper form and shall include the following information:
  - a. A completed High Density Development Permit Application signed by the owner of the property. The signature of the consulting engineer or other agent will be accepted on the application only if accompanied by a letter of authorization.
  - b. Required number of development plans and specifications of the storm water control structure.
  - c. Submittal of a sediment and erosion control plan to the appropriate agency.
  - d. Permit application fees.
2. Structural BMP's.
  - A. All Structural BMP's shall be designed and stamped by either a North Carolina registered professional engineer or landscape architect.
  - B. Structural BMP's shall be designed for specific pollutant removal according to modeling techniques approved by the North Carolina Division of Water Quality in the latest revision of the Charlotte-Mecklenburg BMP Design Manual. Specific requirements for these systems shall be in accordance with the design criteria and standards contained in the Charlotte-Mecklenburg Land Development Standards Manual.
  - C. Qualifying areas of the Structural BMP's may be considered pervious when computing total built-upon area. However, if the structure is used to compute the percentage built-upon area for one site, it shall not be used to compute the built-upon area for any other site or area.

- D. The design of the Structural BMP's shall include the appropriate easements for ingress and egress necessary to perform inspections, maintenance, repairs and reconstruction.

3. Installation of Structural BMP's.

A. SUBDIVISIONS - Posting of Financial Security Required

When Structural BMP's are required under the High Density Option for subdivisions, the approval of the High Density Development Permit will be subject to the owner filing a surety bond or letter of credit or making other financial arrangements which are acceptable to the City Engineering Department in an amount to be determined by the City Engineering Department in consultation with other agencies, ~~such as the Environmental Protection Department,~~ in a form which is satisfactory to the City Attorney, guaranteeing the installation and maintenance of the required Structural BMP's until issuance of certificates of occupancy for seventy-five percent (75%) of all construction which might reasonably be anticipated to be built within the area which drains into the Structural BMP's allowing credit for improvements completed prior to the submission of the final plat. Upon issuance of certificates of occupancy for seventy-five percent (75%) of all anticipated construction relative to the required Structural BMP's, written notice thereof must be given by the owner to the City Engineering Department. The City Engineering Department will arrange for an inspection of the Structural BMP's and if found satisfactory, will within 30 days of the date of notice notify the owner in writing.

B. Property Other Than SUBDIVISIONS – Civil Penalties

Any person who fails to install or maintain the required structural BMP in accordance with this chapter shall be subject to a civil penalty of not more than \$500. No penalties shall be assessed until the person alleged to

be in violation has been notified of the violation by registered or certified mail, return receipt requested, or other means which are reasonably calculated to give actual notice. The notice shall describe the violation with reasonable particularity, specify a reasonable time period within which the violation must be corrected, and warn that failure to correct the violation within the time period will result in the assessment of a civil penalty or other enforcement action. Each day that the violation continues shall constitute a separate violation.

4. Maintenance Responsibility of Structural BMP's.

- A. For single-family developments, the owner may petition the City Council for acceptance of maintenance responsibilities of the Structural BMP's. The City will accept maintenance responsibilities if the Structural BMP's have been built according to standards contained in the Charlotte-Mecklenburg Land Development Standards Manual or other published standards of the City Engineer and are functioning as designed, provided, however, that the City Council may attach reasonable conditions to its acceptance of maintenance responsibilities including requiring the granting of appropriate easements for ingress and egress.
- B. Maintenance of Structural BMP's other than those in single-family developments, which have been accepted by the City, shall be the responsibility of the property owner. The property owner may apply for a credit to the property's storm water fee according to the policies of Charlotte-Mecklenburg Storm Water Services to compensate for this responsibility. The property owner will be responsible for the on-going maintenance of the Structural BMP's. If at any time the BMP's are not properly maintained, the credit will be suspended.

5. Additional Requirements.

An Occupancy Permit shall not be issued for any building within the permitted development until the City Engineering Department has approved the storm water control structure, as provided in Section 10.608.3(A).

2. PART 6: CATAWBA RIVER/LAKE WYLIE WATERSHED OVERLAY

- a. Amend Section 10.608, "Buffer Areas Required", subsection (3), "Additional buffer requirements", subsection (a) and subsection (b) by removing existing language pertaining to County Environmental Protection Department and adding language referring to Charlotte-Mecklenburg Storm Water Services. The remaining subsection (3) shall remain unchanged. The revised text shall read as follows:

**Section 10.608. Buffer areas required.**

Vegetative buffers are required along the shoreline of the Catawba River/Lake Wylie measured from the normal pool elevation and along all perennial streams measured from the top of bank on each side of the stream.

1. Critical Area

In the critical area the minimum buffer areas are as follows:

- a. low density option - 100'
- b. high density option - 100'

2. Protected Area

In the protected area the minimum buffer areas are as follows:

- a. low density option - 40'
- b. high density option - 100'

3. Additional buffer requirements:

No permanent structures, built upon areas, septic tanks systems or any other disturbance of existing vegetation shall be allowed within the buffer except as follows:

- a. No trees larger than 2-inch caliper are to be removed except for dead or diseased trees. Trees less than 2-inch caliper and undergrowth may be removed to be replaced by an effective stabilization and filtering ground cover based upon the "Watershed Buffer Guidelines for Mecklenburg County" contained in Appendix 5 and as approved by the County Environmental Protection Department Charlotte-Mecklenburg Storm Water Services.

- b. Streambank or shoreline stabilization is allowed as approved on a plan submitted to the applicable Engineering Department and ~~the County Environmental Protection Department~~ Charlotte-Mecklenburg Storm Water Services.
- c. Water dependent structures and public projects such as road crossings and greenway paths are allowed where no practical alternative exists. These activities should minimize built-upon surface area, direct runoff away from surface waters and maximize the utilization of nonstructural BMP's and pervious materials.
- d. During new development or the expansion of existing development the City can require enhancement of the existing vegetation in the buffer if necessary so that the buffer can effectively perform its filtering and absorption functions based on the "Watershed Buffer Guidelines for Mecklenburg County" contained in Appendix 5.
- e. Non-impervious recreational development and non-impervious pedestrian trails may be allowed in the required buffer if located a minimum of 30' from the stream bank.

4. Mitigations of disturbed buffers required.

Should existing vegetation within the buffer be disturbed (except as allowed by this Ordinance) or should vegetation, which was added to a buffer pursuant to the requirement that existing vegetation in the buffer be enhanced, be disturbed (except as allowed by this Ordinance), Engineering and Property Management (for commercial and planned multi-family projects and change of use permits) or Neighborhood Development (for all other residential projects and change of use permits) shall require that any vegetation remaining in the buffer be enhanced in accordance with the "Watershed Buffer Guidelines for Mecklenburg County" contained in Appendix 5 so that the buffer can effectively perform its filtering and absorption functions.

*(Petition No. 2005-78, § 10.608(4), 06/20/05)*

- b. Amend Section 10.609, "High Density Option" by removing existing language "Mecklenburg" from Charlotte-Mecklenburg Land Development Standards Manual. Amend subsection (2), "Structural BMP's" by removing existing language pertaining to the North Carolina Division of Water Quality, adding language referring to the Charlotte-Mecklenburg BMP Design Manual and removing existing language "Mecklenburg" from Charlotte-Mecklenburg Land

Development Standards Manual. Amend subsection (3), "Installation of Structural BMP's" by removing existing language pertaining to the Environmental Protection Department. Amend subsection (4), "Maintenance Responsibility of Structural BMP's" by removing existing language "Mecklenburg" from Charlotte-Mecklenburg Land Development Standards Manual. The remaining Section 10.609 shall remain unchanged. The revised text shall read as follows:

**Section 10.609. High Density Option.**

The High Density Option allows for a greater development density provided engineered controls (Structural BMP's) are used to manage storm water runoff. Structural BMP's are required under the High Density Option. High density development shall meet the requirements of this section, the Charlotte-Mecklenburg Land Development Standards Manual and other published standards of the City Engineering Department.

1. High Density Permit Application.
  - A. A High Density Development Permit shall be required for new development exceeding the requirements of the low density option.
  - B. Application for a High Density Development Permit shall be submitted as follows:
    1. Development plans subject to the Subdivision Ordinance and the Sediment and Erosion Control Ordinance and reviewed through the Charlotte-Mecklenburg Planning Commission will submit the High Density Development Permit to the Subdivision Administrator as part of the subdivision review application process.
    2. Development plans not subject to the Subdivision Ordinance will submit the High Density Development Permit to the City Engineer as part of the Sediment and Erosion Control requirements of the building permit application process.
    3. Applications for the High Density Option shall be made on the proper form and shall include the following information:
      - a. A completed High Density Development Permit Application signed by the owner of the property. The signature of the consulting

engineer or other agent will be accepted on the application only if accompanied by a letter of authorization.

- b. Required number of development plans and specifications of the storm water control structure.
- c. Submittal of a sediment and erosion control plan to the appropriate agency.
- d. Permit application fees.

## 2. Structural BMP's

- A. All Structural BMP's shall be designed and stamped by either a North Carolina registered professional engineer or landscape architect.
- B. Structural BMP's shall be designed for specific pollutant removal according to modeling techniques approved by the North Carolina Division of Water Quality in the latest revision of the Charlotte-Mecklenburg BMP Design Manual. Specific requirements for these systems shall be in accordance with the design criteria and standards contained in the Charlotte-Mecklenburg Land Development Standards Manual.
- C. Qualifying areas of the Structural BMP's may be considered pervious when computing total built-upon area. However, if the structure is used to compute the percentage built-upon area for one site, it shall not be used to compute the built-upon area for any other site or area.
- D. The design of the Structural BMP's shall include the appropriate easements for ingress and egress necessary to perform inspections, maintenance, repairs and reconstruction.

## 3. Installation of Structural BMP's

- A. SUBDIVISIONS - Posting of Financial Security Required

When Structural BMP's (Structural BMP's) are required under the High Density Option for

subdivisions, the approval of the High Density Development Permit will be subject to the owner filing a surety bond or letter of credit or making other financial arrangements which are acceptable to the City Engineering Department in an amount to be determined by the City Engineering Department in consultation with other agencies, ~~such as the Environmental Protection Department,~~ in a form which is satisfactory to the City Attorney, guaranteeing the installation and maintenance of the required Structural BMP's until issuance of certificates of occupancy for seventy-five percent (75%) of all construction which might reasonably be anticipated to be built within the area which drains into the Structural BMP's, allowing credit for improvements completed prior to the submission of the final plat. Upon issuance of certificates of occupancy for seventy-five percent (75%) of all anticipated construction relative to the required Structural BMP's, written notice thereof must be given by the owner to the City Engineering Department. The City Engineering Department will arrange for an inspection of the Structural BMP's and if found satisfactory, will within 30 days of the date of notice notify the owner in writing.

B. Property Other Than SUBDIVISIONS - Civil Penalties

Any person who fails to install or maintain the required structural BMP in accordance with this chapter, shall be subject to a civil penalty of not more than \$500. No penalties shall be assessed until the person alleged to be in violation has been notified of the violation by registered or certified mail, return receipt requested, or other means which are reasonably calculated to give actual notice. The notice shall describe the violation with reasonable particularity, specify a reasonable time period within which the violation must be corrected, and warn that failure to correct the violation within the time period will result in the assessment of a civil penalty or other enforcement action. Each day that the violation continues shall constitute a separate violation.

4. Maintenance Responsibility of Structural BMP's

A. For single family developments, the owner may petition the City Council for acceptance of

maintenance responsibilities of the Structural BMP's. The City will accept maintenance responsibilities if the Structural BMP's have been built according to standards contained in the Charlotte-Mecklenburg Land Development Standards Manual or other published standards of the City Engineer and are functioning as designed, provided, however, that the City Council may attach reasonable conditions to its acceptance of maintenance responsibilities including requiring the granting of appropriate easements for ingress and egress.

- B. Maintenance of Structural BMP's other than those in single family developments which have been accepted by the City shall be the responsibility of the property owner. The property owner may apply for a credit to the property's storm water fee according to the policies of Charlotte-Mecklenburg Storm Water Services to compensate for this responsibility. The property owner will be responsible for the on-going maintenance of the Structural BMP's. If at any time the BMP's are not properly maintained, the credit will be suspended.

5. Additional Requirements

An Occupancy Permit shall not be issued for any building within the permitted development until the City Engineering Department has approved the storm water control structure, as provided in Section 10.609.3(A).

3. PART 7: LOWER LAKE WYLIE WATERSHED OVERLAY

- a. Amend Section 10.704, "Lower Lake Wylie Watershed Overlay District Subareas established", subsection (1) and subsection (2) by removing existing language pertaining to Mecklenburg County Zoning Maps and adding language referring to City of Charlotte Zoning Maps. The remaining Section 10.704 shall remain unchanged. The revised text shall read as follows:

**Section 10.704. Lower Lake Wylie Watershed Overlay District Subareas established.**

- 1. Critical Area. The Critical Area extends one-half mile (½) inland from the full pond elevation of 569.4' above sea level of Lower Lake Wylie from the upstream side of the Paw Creek Arm ("Paw Creek Cove"), to the South Carolina state line as shown more specifically on the ~~Mecklenburg County~~City of Charlotte Zoning Maps.

2. Protected Area. The Protected Area extends from the outer boundaries of the Critical Area to the extent of the watershed or approximately five (5) miles from the Lake upstream in the Paw Creek drainage basin as shown more specifically on the ~~Mecklenburg County~~ City of Charlotte Zoning Maps.
- b. Amend Section 10.708, "Buffer Areas Required", subsection (3), "Additional buffer requirements", subsection (a) and subsection (b) and subsection (5) by removing existing language pertaining to County Environmental Protection Department and adding language referring to Charlotte-Mecklenburg Storm Water Services. The remaining Section 10.708 shall remain unchanged. The revised text shall read as follows:

**Section 10.708. Buffer areas required.**

Undisturbed vegetative buffers are required along the shoreline of the Lower Lake Wylie measured from the full pond elevation and along each side of all perennial streams measured from the top of bank.

1. Critical Area

In the critical area the minimum buffer areas are as follows:

- a. low density option - 50'
- b. high density option - 100'

2. Protected Area

In the protected area the minimum buffer areas are as follows:

- a. low density option - 40'
- b. high density option - 100'

3. Additional buffer requirements:

No permanent structures, built upon areas, septic tanks systems or any other disturbance of existing vegetation shall be allowed within the buffer except as follows:

- a. No trees larger than 2-inch caliper are to be removed except for dead or diseased trees. Trees less than 2-inch caliper and undergrowth may be removed to be replaced by an effective stabilization and filtering ground cover based upon the Watershed Buffer Guidelines for Mecklenburg County contained in Appendix 5 and as approved by the ~~County Environmental Protection~~

Department Charlotte-Mecklenburg Storm Water Services.

- b. Streambank or shoreline stabilization is allowed as approved on a plan submitted to the City Engineer and the ~~County Environmental Protection Department~~ Department Charlotte-Mecklenburg Storm Water Services.
- c. Water dependent structures and public projects such as road crossings, sewer lines, runways and greenway paths are allowed where no practical alternative exists. These activities should minimize built-upon surface area, direct runoff away from surface waters and maximize the utilization of nonstructural BMP's and pervious materials.
- d. During new development or the expansion of existing development the City can require enhancement of the existing vegetation in the buffer if necessary so that the buffer can effectively perform its filtering and absorption functions based on the Watershed Buffer Guidelines for Mecklenburg County contained in Appendix 5.
- e. Non-impervious recreational development and non-impervious pedestrian trails may be allowed in the required buffer if located a minimum of 30 feet from the stream bank.
- f. Buffer width shall be increased 50% for new developments under the high-density option located along the lakeshore that have average slopes equal to or greater than 50% within the 100 foot buffer.

The average slope shall be calculated by measuring the slope from the highest and lowest elevations at the 100-foot buffer to the 569.4 foot full pond elevation of Lake Wylie. The sum of the two (2) measurements will be divided by two (2) to determine the average slope within the 100-foot buffer. The additional buffer area shall be applied in areas of the tract where slopes are greatest to obtain the maximum benefit from the increased buffer area.

4. Re-Vegetation of disturbed buffers required.

Should existing vegetation within the buffer be disturbed (except as allowed by this Ordinance) or should vegetation which was

added to a buffer pursuant to the requirement that existing vegetation in the buffer be enhanced be disturbed (except as allowed by this Ordinance), the Engineering and Property Management (for commercial and planned multi-family projects and change of use permits) or Neighborhood Development (for all other residential projects and change of use permits) shall require that any vegetation remaining in the buffer be enhanced in accordance with the Watershed Buffer Guidelines for Mecklenburg County contained in Appendix 5 so that the buffer can effectively perform its filtering and absorption functions.  
(Petition No. 2005-78, § 10.708(4), 06/20/05)

5. If a building permit is required for property improvement under the High Density Option, which will result in an increase in impervious area, shoreline stabilization is required as needed and allowed when unstable shorelines are present; and as approved on a plan submitted to the City Engineer or their designee and the County Environmental Protection Department Charlotte-Mecklenburg Storm Water Services and as allowed by Duke Power's Shoreline Management Plan.
- c. Amend Section 10.709, "Mitigation" by removing existing language pertaining to Mecklenburg County Environmental Protection Department, adding language referring to Charlotte-Mecklenburg Storm Water Services and removing existing language "Mecklenburg" from Charlotte-Mecklenburg Land Development Standards Manual. Amend, subsection (1), "Buffer Restoration" by removing existing language pertaining to Mecklenburg County Environmental Protection Department and adding language referring to Charlotte-Mecklenburg Storm Water Services. The remaining Section 10.709 shall remain unchanged. The revised text shall read as follows:

**Section 10.709. Mitigation.**

Buffer impacts are allowed only under legitimate "hardship" situations and only following approval of a site-specific mitigation plan by the Mecklenburg County Department of Environmental Protection Charlotte-Mecklenburg Storm Water Services. The following techniques are available for mitigation. Specifications for these pre-approved mitigation techniques are provided in the Charlotte-Mecklenburg Land Development Standards Manual.

1. Buffer Restoration:

The owner may restore and preserve the buffer area on any stream of equivalent or greater drainage area within the Lower Lake Wylie Watershed area the condition of which is determined to be qualified for restoration by the Mecklenburg County Department of Environmental Protection Charlotte-Mecklenburg Storm Water Services on

a 1:1 basis utilizing the square feet of buffer impacted.  
This restoration shall include stream bank improvements.

2. Buffer Preservation:

The owner may purchase, fee simple, other stream segments at equivalent or greater drainage area on a 1:1 square foot basis and convey fee simple and absolute title to the land to the City/County or other conservation organization.

3. Mitigation Credits:

The purchase of mitigation credits on a 1:1 basis utilizing the square feet of buffer impacted and the established rate of purchase shall allow for stream buffer impacts on the specific site. Mitigation credits purchased under any other program (i.e., U.S. Army Corp of Engineers) shall not cover this requirement unless the issuing agency agrees to relinquish the funds to the appropriate City/County agency.

- d. Amend Section 10.710, "High Density Option" by removing existing language "Mecklenburg" from Charlotte-Mecklenburg Land Development Standards Manual. Amend subsection (2), "Structural BMP's" by removing existing language pertaining to the North Carolina Division of Water Quality, adding language referring to the Charlotte-Mecklenburg BMP Design Manual and removing existing language "Mecklenburg" from Charlotte-Mecklenburg Land Development Standards Manual. Amend subsection (3), "Installation of Structural BMP's" by removing existing language pertaining to the Environmental Protection Department. Amend subsection (4), "Maintenance Responsibility of Structural BMP's" by adding language Charlotte to the existing Land Development Standards Manual. The remaining Section 10.710 shall remain unchanged. The revised text shall read as follows:

**Section 10.710. High Density Option.**

The High Density Option allows for a greater development density provided engineered controls (Structural BMP's) are used to manage stormwater runoff. Structural BMP's are required under the High Density Option. High density development shall meet the requirements of this section, the Charlotte-Mecklenburg Land Development Standards Manual and other published standards of the City Engineering Department.

1. High Density Permit Application.

- A. A High Density Development Permit shall be required for new development exceeding the requirements of the low density option.

B. Application for a High Density Development Permit shall be submitted as follows:

- i. Development plans subject to the Subdivision Ordinance and the Sediment and Erosion Control Ordinance and reviewed through the Charlotte-Mecklenburg Planning Commission will submit the High Density Development Permit to the Subdivision Administrator as part of the subdivision review application process.
- ii. Development plans not subject to the Subdivision Ordinance will submit the High Density Development Permit to the City Engineer as part of the Sediment and Erosion Control requirements of the building permit application process.
- iii. Applications for the High Density Option shall be made on the proper form and shall include the following information:
  - a. A completed High Density Development Permit Application signed by the owner of the property. The signature of the consulting engineer or other agent will be accepted on the application only if accompanied by a letter of authorization.
  - b. Required number of development plans and specifications of the stormwater control structure.
  - c. Submittal of a sediment and erosion control plan to the appropriate agency.
  - d. Permit application fees.

2. Structural BMP's

- A. All Structural BMP's shall be designed and stamped by either a North Carolina registered professional engineer or landscape architect.
- B. Structural BMP's shall be designed for specific pollutant removal according to modeling techniques

approved by the North Carolina Division of Water Quality in the latest revision of the Charlotte-Mecklenburg BMP Design Manual. Specific requirements for these systems shall be in accordance with the design criteria and standards contained in the Charlotte-Mecklenburg Land Development Standards Manual.

- C. Qualifying areas of the Structural BMP's may be considered pervious when computing total built-upon area. However, if the structure is used to compute the percentage built-upon area for one site, it shall not be used to compute the built-upon area for any other site or area.
- D. The design of the Structural BMP's shall include the appropriate easements for ingress and egress necessary to perform inspections, maintenance, repairs and reconstruction.

3. Installation of Structural BMP's

A. SUBDIVISIONS - Posting of Financial Security Required

When Structural BMP's (Structural BMP's) are required under the High Density Option for subdivisions, the approval of the High Density Development Permit will be subject to the owner filing a surety bond or letter of credit or making other financial arrangements which are acceptable to the City Engineering Department in an amount to be determined by the City Engineering Department in consultation with other agencies, ~~such as the Environmental Protection Department~~, in a form which is satisfactory to the City Attorney, guaranteeing the installation and maintenance of the required Structural BMP's until issuance of certificates of occupancy for seventy-five percent (75%) of all construction which might reasonably be anticipated to be built within the area which drains into the Structural BMP's, allowing credit for improvements completed prior to the submission of the final plat. Upon issuance of certificates of occupancy for seventy-five percent (75%) of all anticipated construction relative to the required Structural BMP's, written notice thereof must be given by the owner to the City Engineering Department. The City Engineering Department will arrange for an inspection of the Structural BMP's

and if found satisfactory, will within 30 days of the date of notice notify the owner in writing.

B. Property Other Than SUBDIVISIONS - Civil Penalties

Any person who fails to install or maintain the required structural BMP in accordance with this chapter, shall be subject to a civil penalty of not more than \$500. No penalties shall be assessed until the person alleged to be in violation has been notified of the violation by registered or certified mail, return receipt requested, or other means which are reasonably calculated to give actual notice. The notice shall describe the violation with reasonable particularity, specify a reasonable time period within which the violation must be corrected, and warn that failure to correct the violation within the time period will result in the assessment of a civil penalty or other enforcement action. Each day that the violation continues shall constitute a separate violation.

4. Maintenance Responsibility of Structural BMP's

A. For single family developments, the owner may petition the City Council for acceptance of maintenance responsibilities of the Structural BMP's. The City will accept maintenance responsibilities if the Structural BMP's have been built according to standards contained in the Charlotte Land Development Standards Manual or other published standards of the City Engineer and are functioning as designed, provided, however, that the City Council may attach reasonable conditions to its acceptance of maintenance responsibilities including requiring the granting of appropriate easements for ingress and egress.

B. Maintenance of Structural BMP's other than those in single family developments which have been accepted by the City shall be the responsibility of the property owner. The property owner may apply for a credit to the property's storm water fee according to the policies of Charlotte-Mecklenburg Storm Water Services to compensate for this responsibility. The property owner will be responsible for the on-going maintenance of the Structural BMP's. If at any time the BMP's are not properly maintained, the credit will be suspended.

5. Additional Requirements

An Occupancy Permit shall not be issued for any building within the permitted development until the City Engineering Department has approved the stormwater control structure, as provided in Section 10.710.3(A).

B. CHAPTER 12: DEVELOPMENT STANDARDS OF GENERAL APPLICABILITY

1. PART 6: STORMWATER DRAINAGE

- a. Amend Section 12.603, "Standards for plan approval", subsection (1) by removing existing language "Mecklenburg" from Charlotte-Mecklenburg Land Development Standards Manual and by revising title of Charlotte-Mecklenburg Storm Drainage Design Manual to Charlotte-Mecklenburg Storm Water Design Manual. Amend subsection (3) by removing existing language "Mecklenburg" from Charlotte-Mecklenburg Land Development Standards Manual. The remaining Section 12.603 shall remain unchanged. The revised text shall read as follows:

**Section 12.603. Standards for plan approval.**

The following standards shall be met for approval of a storm water drainage plan:

- (1) The City Engineer shall review the drainage plan for compliance with the standards contained in the current edition of the Charlotte-Mecklenburg Land Development Standards Manual, the Charlotte-Mecklenburg Storm Drainage-Water Design Manual, which is to be adopted in its entirety pursuant to G.S. 160A-76, and all other relevant and appropriate standards established by the Engineering Department.
- (2) The City Engineer shall not approve a drainage plan if the impervious ground cover proposed in the plan would increase the peak level of storm water runoff from the site, unless the drainage plan identifies measures to control and limit runoff to peak levels no greater than would occur from the site if left in its natural, undeveloped condition.
- (3) All storm water collection and drainage systems shall be designed in compliance with the Charlotte-Mecklenburg Land Development Standards Manual.

2. PART 8: S.W.I.M. (SURFACE WATER IMPROVEMENT AND MANAGEMENT)  
STREAM BUFFERS STORMWATER DRAINAGE

- a. Amend Section 12.804, "Buffer Standards", subsection (2), Footnote (1) by removing existing language "Mecklenburg" from Charlotte-Mecklenburg Land Development Standards Manual. Amend subsection (3), "Diffuse flow requirement" by removing existing language "Mecklenburg" from Charlotte-Mecklenburg Land Development Standards Manual. The remaining Section 12.804 shall remain unchanged. The revised text shall read as follows:

**Section 12.804. Buffer Standards.**

Required stream buffer widths vary based on the size of the upstream drainage basin. Mecklenburg County's Geographic Information System (GIS) will serve as a tool to delineate the size of drainage basins and specify the corresponding buffer widths. S.W.I.M. stream buffer requirements specified in this PART 8 begin at the point where the stream drains 100 acres or greater. Refer to the Charlotte-Mecklenburg Storm Water Design Manual for optional buffers on streams, which drain less than 100 acres.

- (1) Buffer widths for streams draining equal to and greater than 100 acres

Buffers are required for streams draining areas equal to or greater than 100 acres as specified below. Buffer widths for these streams are measured horizontally on a line perpendicular to the surface water, landward from the top of the bank on each side of the stream.

Drainage Area Designation	Stream Side Zone	Managed Use Zone	Upland Zone	of
≥ 100 acres	20 feet	None	15 feet	35 f
≥ 300 acres	20 feet	20 feet	10 feet	50 f
≥ 640 acres <sup>(1)</sup>	30 feet	45 feet	25 feet PLUS 50% of the <u>area</u> of the FEMA fringe beyond 100 feet	100 the frin

**FOOTNOTES:**

- <sup>(1)</sup> Buffer widths for drainage areas of ≥ 640 acres:
1. The FEMA fringe and FLUM floodway encroachment lines will be used for floodplain and buffer calculations.
  2. If the floodplain is less than 100 feet wide, the total width of the buffer on that side of the stream will be 100 feet except as provided in 4. below.
  3. The landowner/developer has discretion to designate the buffer zone beyond the 100-foot minimum. The

additional buffer area beyond 100 feet must be contiguous with at least a portion of the required 100-foot buffer and be configured in such a manner as to benefit water quality.

4. So long as the total buffer width is maintained, the buffer may vary in width on either side of the stream based on individual stream side topography provided that the owner(s) control both sides of the stream and the stream side zone is maintained on both sides of the stream.
5. Buffer requirements do not apply to the main channel of the Catawba River including Lake Norman, Mountain Island Lake and Lake Wylie.

(2) Buffer description

Buffer function, vegetation and use vary according to the different buffer zones as described in the following table.

Characteristics	Stream Side Zone	Managed Use Zone	
Function	Protect the integrity of the ecosystems	Provide distance between upland development and the stream side zone	Prev filter
Vegetative Targets <sup>(1)</sup>	<b><u>Undisturbed (no cutting or clearing allowed)</u></b> – If existing tree density is inadequate, reforestation is encouraged	<b><u>Limited clearing</u></b> – Existing tree density must be retained to a minimum of 8 healthy trees of a minimum 6 inch caliper per 1000 square feet – If existing tree density is inadequate, reforestation is encouraged	<b><u>Gras</u></b> grou Fore:
Uses <sup>(2)</sup>	<b><u>Very restricted</u></b> – Permitted uses limited to: flood control structures and bank stabilization as well as installation of utilities and road crossings with stabilization of disturbed areas as specified in Section 12.806.2	<b><u>Restricted</u></b> – Permitted uses limited to: all uses allowed in the Stream Side Zone, as well as storm water best management practices (BMPs), bike paths, and greenway trails (not to exceed 10 feet in width)	<b><u>Rest</u></b> limit the S Man: as gr gardi stora com exce:

FOOTNOTES:

- <sup>(1)</sup> Re-vegetation of disturbed buffers is required as specified in the Charlotte-Mecklenburg Land Development Standards

Manual when such disturbances result in the failure of the buffer system to comply with the vegetative targets specified above. The manual also contains recommended tree densities for each zone for voluntary reforestation efforts.

- (2) Fill material can not be brought into the buffer. Grading is allowed only in the Upland Zone. Commercial buildings or occupied structures are not allowed in the buffer. Permitted uses within the buffer zones should be coordinated to ensure minimal disturbance of the buffer system. For example, if it is necessary to install utilities within the buffer, every attempt should be made to build greenway trails so they follow the cleared areas instead of additional clearing.

- (3) Diffuse flow requirement

Diffuse flow of runoff shall be maintained in the buffer by dispersing concentrated flow and reestablishing vegetation. Techniques for providing diffuse flow are specified in the Charlotte-Mecklenburg Land Development Standards Manual.

- (a) Concentrated runoff from ditches or other manmade conveyances shall be converted to diffuse flow before the runoff enters the buffer.
- (b) Periodic corrective action to restore diffuse flow shall be taken by the property owner as necessary to prevent the formation of erosion gullies.

- (4) Ponds

Ponds, which intersect the stream channel, shall have the same buffers as the original stream measured from the top of the bank of the pond. Buffer requirements shall not apply to wet ponds used as structural BMPs.

- (5) Buffer delineation

The following buffer delineations are required:

- (a) Streams and buffer boundaries including all buffer zones must be clearly delineated on all construction plans, including grading and clearing plans, erosion, drainage and sediment control plans and site plans.
- (b) Outside buffer boundaries must be clearly marked on-site prior to any land disturbing activities.

- (c) The outside boundary of the buffer must be permanently marked at highway stream crossings.
- (d) Streams and buffer boundaries including the delineation of each buffer zone must be specified on all surveys and record plats.
- (e) Buffer requirements must be referenced in homeowners' association documents.

- b. Amend Section 12.806, "Mitigation", subsection (1) "Purpose" by removing existing language pertaining to Mecklenburg County Environmental Protection Department, adding language referring to Charlotte-Mecklenburg Storm Water Services. Amend subsection (2) "Buffer impacts not requiring mitigation" by removing existing language "Mecklenburg" from Charlotte-Mecklenburg Land Development Standards Manual. Amend, subsection (3), "Buffer impacts requiring mitigation" by removing existing language pertaining to Mecklenburg County Environmental Protection Department and adding language referring to Charlotte-Mecklenburg Storm Water Services. Amend subsection (4) "Pre-approved mitigation techniques" and corresponding subsections (a) and (b) by removing existing language pertaining to Mecklenburg County Environmental Protection Department, adding language referring to Charlotte-Mecklenburg Storm Water Services and removing existing language "Mecklenburg" from Charlotte-Mecklenburg Land Development Standards Manual. Amend subsection (4) "Pre-approved mitigation techniques", subsections (d) and (e) by removing existing language "Mecklenburg" from Charlotte-Mecklenburg Land Development Standards Manual. Amend subsection (4) "Pre-approved mitigation techniques", subsection (h), subsection (5) "Other mitigation techniques", and subsection (6) "Posting of financial security required for structural BMPs" by removing existing language pertaining to Mecklenburg County Environmental Protection Department and adding language referring to Charlotte-Mecklenburg Storm Water Services. The remaining Section 12.806 shall remain unchanged. The revised text shall read as follows:

**Section 12.806. Mitigation.**

(1) Purpose

The purpose of this section is to set forth the basis on which mitigation is required for unavoidable or approved buffer impacts within any of the buffer zones. This mitigation basis shall allow the property owner or other entity the opportunity to disturb a buffer, provided that steps are taken to offset the buffer loss. Prior to any buffer impact, any person or entity seeking approval of a buffer impact shall submit the requisite site and mitigation information for approval to the Mecklenburg County Department of ~~Environmental Protection~~Charlotte-Mecklenburg Storm

Water Services as specified below, to the extent approval is required by this Part.

(2) Buffer impacts not requiring mitigation

The following buffer impacts do not require mitigation or specific plan approval but are required to comply with the specifications provided in the Charlotte-Mecklenburg Land Development Standards Manual for stabilization of disturbed areas to minimize negative water quality impacts.

- (a) Road crossings for connectivity or transportation links where the Charlotte-Mecklenburg Planning Commission has granted site plan approval.
- (b) Utility crossings.
- (c) Parallel water and sewer utility installation as approved by Charlotte-Mecklenburg Utilities.
- (d) Public paths and trails parallel to the stream outside the Stream Side Zone and stream crossings. Pathways must use existing and proposed utility alignments or previously cleared areas and minimize tree cutting to the maximum extent practicable. To the extent possible, pathways shall preserve existing drainage patterns and avoid drainage structures that concentrate storm water.
- (e) Incidental drainage improvements/repairs for maintenance.
- (f) Individual pedestrian paths connecting homeowners to the stream in the form of narrow, pervious footpaths with minimal tree disturbance.
- (g) New domesticated animal trails (farming) where existing trails are lost as a result of action beyond the farmer's control. Stream crossings should be constructed and maintained to minimize impacts to the Stream Side Zone with fencing perpendicular and through the buffer to direct animal movement.
- (h) Mitigation approved by a state or federal agency acting pursuant to Sections 401 or 404 of the federal Clean Water Act.

(3) Buffer impacts requiring mitigation

Impacts to stream buffers not specified in Section 12.806.2,

proposed to allow development or other land use in a buffer, shall be required to mitigate or offset the proposed impact in accordance with this Section. Buffer impacts requiring mitigation and plan approval include:

- Filling or piping of streams
- Removal of vegetation from the Stream Side or Managed Use Zones other than as specified by Section 12.804.2 "Vegetative Targets."
- Paths proposed within the Stream Side Zone
- Stream relocations
- Fences and walls requiring tree removal in the Stream Side or Managed Use Zones
- Other buffer impacts not permitted under Section 12.804.2.

The landowner or other entity proposing any of the impacts specified above shall prepare and submit for approval a site specific plan to the ~~Mecklenburg County Department of Environmental Protection~~Charlotte-Mecklenburg Storm Water Services. This site plan shall show the extent of the proposed impact and clearly specify the proposed mitigation technique.

(4) Pre-approved mitigation techniques

The following techniques are available to landowners for mitigation of buffer impacts upon review and approval of a specific site mitigation plan by the ~~Mecklenburg County Department of Environmental Protection~~Charlotte-Mecklenburg Storm Water Services. Specifications for these pre-approved mitigation techniques are provided in the Charlotte-Mecklenburg Land Development Standards Manual.

- (a) Installation of Structural BMPs: The installation of an on-site structural BMP designed to achieve specified pollutant removal targets will allow for stream buffer impacts on the specific site. The BMP should remain outside the Stream Side Zone if practical. A detailed BMP design plan must be submitted to the ~~Mecklenburg County Department of Environmental Protection~~Charlotte-Mecklenburg Storm Water Services for approval based on specifications and pollutant removal targets contained in the Charlotte-Mecklenburg Land Development Standards Manual. This plan must also include a long term maintenance strategy for the BMP complete with the establishment of adequate financing to support the proposed

maintenance practices.

- (b) Stream Restoration: The owner may restore and preserve the buffer area on any stream of equivalent or greater drainage area, the condition of which is determined to be qualified for restoration by the ~~Mecklenburg County Department of Environmental Protection~~Charlotte-Mecklenburg Storm Water Services on a 1:1 basis in linear feet of stream. This restoration shall include stream bank improvements and Stream Side and Managed Use Zone re-vegetation, in accordance with the Charlotte-Mecklenburg Land Development Standards Manual.
- (c) Stream Preservation: The owner may purchase, fee simple, other stream segments at equivalent or greater drainage area on a 1:1 linear foot basis and convey fee simple and absolute title to the land to the City/County or other conservation organization.
- (d) Wetlands Restoration: On a 2:1 acreage basis for disturbed stream and buffer area (2 acres of wetland for each acre of disturbed area), the owner may provide a combination of the preservation and/or restoration of wetlands with protective easements, and the implementation of structural or non-structural BMPs to achieve specific pollutant removal targets within the impacted area as specified in the Charlotte-Mecklenburg Land Development Standards Manual.
- (e) Bottom Land Hardwood Preservation: On a 2:1 acreage basis for impacted stream and buffer area (2 acres of bottomland hardwood for each acre of disturbed area), the owner may provide a combination of the preservation of existing bottom land hardwood forest or other specifically approved natural heritage area by conservation easement or other legal instrument, and the implementation of structural or non-structural BMPs to achieve specific pollutant removal targets within the impacted area as specified in the Charlotte-Mecklenburg Land Development Standards Manual.
- (f) Controlled Impervious Cover: The owner may commit to, and provide, a specific site development plan that limits overall site impervious cover equal to or less than 24%. Development on this basis

shall allow for stream buffer impacts on the specific site. Preservation of the Stream Side Zone is encouraged.

- (g) Open Space Development: The submission of a specific site development plan which preserves 50% of the total land area as undisturbed open space shall allow for stream buffer impacts on the specific site.
- (h) Mitigation Credits: The purchase of mitigation credits on a 1:1 basis utilizing linear feet of stream impacted and the prevailing rate of purchase as established by ~~the Mecklenburg County Department of Environmental Protection~~Charlotte-Mecklenburg Storm Water Services shall allow for stream buffer impacts on the specific site. Mitigation credits purchased under any other program (i.e., U.S. Army Corp of Engineers) shall not cover this requirement unless the issuing agency agrees to relinquish the funds to the appropriate City/County agency.

(5) Other mitigation techniques

No provision of this Part shall prevent the creative development of alternative mitigation plans. The owner shall submit such plan with proposed buffer impacts and detailed mitigation information to ~~the Mecklenburg County Department of Environmental Protection~~Charlotte-Mecklenburg Storm Water Services for approval. The criteria used to judge the acceptability of any alternative plan shall be the degree to which the plan addresses the preservation of the four primary natural functions of stream buffers. Such plans may be submitted in conjunction with a mitigation plan submission to the U.S. Army Corp of Engineers and N.C. Department of Environment and Natural Resources for proposed stream or wetland impacts. ~~The Mecklenburg County Department of Environmental Protection~~Charlotte-Mecklenburg Storm Water Services, when considering proposed mitigation alternatives, shall give equal weight to proposals which utilize the preservation of unique or endangered habitat or natural areas against proposed buffer impacts.

(6) Posting of financial security required for structural BMPs

When structural BMPs (wet detention ponds and other BMPs) are approved for mitigation of a buffer disturbance, the approval shall be subject to the owner filing a surety bond or letter of credit or making other financial

arrangements which are acceptable to the ~~Mecklenburg County Department of Environmental Protection~~Charlotte-Mecklenburg Storm Water Services, in a form which is satisfactory to the City Attorney, guaranteeing the installation and maintenance of the required structural BMPs until the issuance of certificates of occupancy for seventy-five percent (75%) of all construction which might reasonably be anticipated to be built within the area which drains into the BMPs, allowing credit for improvements completed prior to the submission of the final plat. At such time that this level of occupancy is achieved, written notice thereof must be given by the owner to the ~~Mecklenburg County Department of Environmental Protection~~Charlotte-Mecklenburg Storm Water Services. The owner must also verify the adequacy of the maintenance plan for the BMPs including the necessary financing to support the proposed maintenance practices. ~~The Mecklenburg County Department of Environmental Protection~~Charlotte-Mecklenburg Storm Water Services will inspect the structural BMPs and verify the effectiveness of the maintenance plan and if found satisfactory, will within 30 days of the date of the notice notify the owner in writing.

(7) Maintenance responsibilities for structural BMPs - Civil Penalties

Maintenance of all structural BMPs shall be the responsibility of the property owner or his designee. Any person who fails to maintain the required BMPs in accordance with the approved maintenance plan shall be subject to a civil penalty of not more than \$500. Each day that the violation continues shall constitute a separate violation. No penalties shall be assessed until the person alleged to be in violation has been notified in writing of the violation by registered or certified mail, return receipt requested, or by other means which are reasonably calculated to give actual notice. The notice shall describe the nature of the violation with reasonable particularity, specify a reasonable time period within which the violation must be corrected, and warn that failure to correct the violation within the time period shall result in assessment of a civil penalty or other enforcement action.

3. PART 9: OTHER APPLICABLE CITY CODE LAND DEVELOPMENT PROVISIONS

- a. Amend Part 9, "OTHER APPLICABLE CITY CODE LAND DEVELOPMENT PROVISIONS", subsection (3) by removing existing language "Mecklenburg" from Charlotte-Mecklenburg Land Development Standards Manual. The remaining Part 9 shall remain unchanged. The revised text shall read as follows:

## **PART 9: OTHER APPLICABLE CITY CODE LAND DEVELOPMENT PROVISIONS**

The following land-use development provisions in the City Code are applicable to zoning approval for the promotion of the health, safety and general welfare of the City, and are incorporated herein by reference as follows:

- (1) Chapter 8: Fire Prevention and Protection, Sec. 8-2 pertaining to the applicability of the North Carolina State Building Code, Volume V, Fire Prevention Code, 1988 Edition, as amended from time to time;
- (2) Chapter 8: Fire Prevention and Protection, Sec. 8-8 pertaining to the applicability of the City of Charlotte Fire Department Rules and Regulations Governing Fire Flow, Water Demand, Fire Hydrants, Fire Connections and Unattended Service Stations dated December 20, 1993, as amended from time to time.
- (3) Chapter 19: Streets and Sidewalks, Article II, Sec. 19-51 through and including Sec. 19-61, pertaining to the applicability of the City of Charlotte's Driveway Regulations, dated July 1979 as amended from time to time, and Article VI, Sec. 19-141 through and including Sec. 19-151, pertaining to the applicability of the Charlotte-Mecklenburg Land Development Standards Manual, as amended from time to time.
- (4) Chapter 21: Trees in its entirety.

Section 2. That this ordinance shall become effective upon its adoption.

Approved as to form:

\_\_\_\_\_  
City Attorney

I, \_\_\_\_\_, City Clerk of the City of Charlotte, North Carolina, DO  
HEREBY CERTIFY that the foregoing is a true and exact copy of an Ordinance adopted

by the City Council of the City of Charlotte, North Carolina, in regular session convened on the \_\_\_\_\_ day of \_\_\_\_\_, 2011, the reference having been made in Minute Book \_\_\_\_\_, and recorded in full in Ordinance Book \_\_\_\_\_, Page(s)\_\_\_\_\_.

WITNESS my hand and the corporate seal of the City of Charlotte, North Carolina, this \_\_\_\_\_ day of \_\_\_\_\_, 2011.

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