

## **Sec. 4.5      Watershed Protection Overlay District (WP-O)**

---

### **4.5.1      General Provisions**

#### **A.      Intent**

The WP-O, Watershed Protection Overlay district provisions of this section are intended to carry out the requirements of Article 21 of Chapter 143 of the General Statutes of North Carolina and to limit the exposure of public supply watersheds to pollution from surface water runoff. The sources of such pollution include stormwater runoff from built upon areas, leachate from sanitary landfills, accidental spills of hazardous materials, wastewater discharges, soil erosion, land application of sludge or petroleum contaminated soils and other point and non point sources of pollution. Generally, land within the Lake Hickory Water Supply Watershed is classified as WS-IV, and land within the Jacob's Fork Water Supply Watershed is classified as WS-III.

#### **B.      Effect of WP-O District Designation**

The WP-O district is applied in combination with ("overlying") existing base zoning districts and has the effect of modifying the requirements, regulations and procedures applying in the applicable base-zoning district to the extent expressly

indicated in this section. When no special WP-O district standards are specified, all other applicable regulations of this Land Development Code will govern.

#### 4.5.2 Applicability; Exemptions

- A. New development within watershed areas on parcels or project sites equal to or greater than one (1) acre shall comply with the requirements of this section. Development on parcels or project sites less than one (1) acre are not exempt if they are part of a larger common plan of development or sale, even though multiple, separate or distinct activities take place on different schedules. All new development shall comply with the buffer requirements of Sec. 4.5.10.
- B. Existing development is not subject to the requirements of this section.
- C. Single lots of record as of June 30, 1993, if zoned for residential use, may be developed for single family residential purposes in accordance with the other requirements of the Hickory Land Development Code without being subject to the restrictions of this section. Such lots of record shall not be required to be combined to achieve the density standards of this section.
- D. Expansions to non single family structures classified as existing development must meet the requirements of this section; however, the built upon area of the existing development is not required to be included in the density calculations. Expansions to structures other than existing development must meet the requirements of this section for the entire site.
- E. Redevelopment of built upon areas of existing development is allowed if the rebuilding activity does not have a net increase in built upon area or provides equal or greater stormwater control than the previous development.
- F. Single family dwellings may be expanded, redeveloped or replaced in accordance with the other requirements of the Hickory Land Development Code without being subject to the restrictions of this section.

#### 4.5.3 WP-O District Boundaries

The boundaries of the WP-O district are shown on the official zoning map. The WP-O district is divided into critical area and protected area sub districts shown on the official zoning atlas.

#### 4.5.4 Definitions

Unless specifically defined below, words or phrases used in this section shall be interpreted so as to give them the meaning they have in common usage and to give this section its most reasonable application. The definitions of this subsection shall be used solely for the purpose of interpreting and administering the Watershed Overlay district provisions of this section.

Term	Definition
Animal Unit	A unit of measurement developed by the US Environmental Protection Agency that is used to compare different types of animal operations.
Best Management Practices (BMP)	A structural or nonstructural management-based practice used singularly or in combination to reduce non-point source inputs to receiving waters in order to achieve water quality protection goals.
BMP Design Manual	The latest edition of the BMP Design Manual published by the North Carolina Department of Environment and Natural Resources, Division of Water Quality (NCDENR, DWQ).

Term	Definition
Buffer	An area of natural or planted vegetation 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. The buffer is measured landward from the normal pool elevation of impounded structures and from the bank of each side of streams or rivers.
Impervious Coverage (TA 14-01)	That portion of a development project that is covered by impervious or partially impervious cover including buildings, pavement, gravel areas, recreation facilities (e.g., tennis courts, etc.) (Note: Wooden slatted decks and the water area of a swimming pool are considered pervious.) Measurements of impervious coverage shall be based upon net project area excluding land within existing street rights-of-way or within the flooding easements of Lake Hickory.
Critical Area	The watershed area adjacent to Lake Hickory west of the NC 127 bridge extending either one-half mile from the normal pool elevation of the lake or to the ridgeline of the watershed (whichever comes first) where the risk associated with pollution of the water supply is greatest. This term also applies to any portion of the Hickory Regional Planning Area located in the Jacob's Fork Water Supply Watershed for the application of watershed protection overlay district regulations.
Developed Parcel	Any parcel of a parcel pair that, under any approval granted under this part, may be developed to a development density or intensity that exceeds the maximum development density or intensity that would apply to the parcel if the paired-parcel averaged-density development option were not available.
Exemption	An exemption is the complete waiver of a management requirement or the relaxation of any management requirement that applies to a development proposal intended to qualify under the high-density option.
Existing Development	Existing development, for the purposes of these rules, shall be defined as those projects that are built or those projects that at a minimum have established a vested right under North Carolina zoning law as of the effective date this Water Supply Ordinance (July 1, 1993) or such earlier time that the City of Hickory's management plans and ordinance shall specify, based on at least one of the following criteria: (1) Substantial expenditures of resources (time, labor, money) based on a good faith reliance upon having received a valid approval from the City of Hickory to proceed with the project; or upon having an approved preliminary plat or planned development or group housing development plan; or (2) Having an outstanding valid building permit as authorized by the North Carolina General Statutes (GS 160A-385.1); or (3) Having an outstanding zoning compliance permit as authorized by the North Carolina General Statutes (GS 160A-385.1(f)(3)) and/or meeting the requirements for establishing a zoning vested right.
Hazardous Material	Any substance listed as such in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) at 42 U.S.C. Chapter 103 (CERCLA); the 1986 amendments to CERCLA known as the Superfund Amendments and Reauthorization Act (SARA, Section 302 (dealing with extremely hazardous substances); or 33 U.S.C. § 1321 (Section 311 of the Clean Water Act dealing with oil and hazardous substances).
Landfill	A facility used for the disposal of solid waste on land in a sanitary manner in accordance with Chapter 130A, Article 9 of the NC General Statutes. For the purpose of this section, the term does not include composting facilities.
Nonresidential Development	All development other than residential development, agriculture or silviculture.
Paired-parcel Averaged-density Development (TA 14-01)	A development proposal that includes a parcel pair meeting the development standards of this Section and that qualifies for local development approval under the density-averaging provision of NCGS §143-214.5.

Term	Definition
Parcel Pair	Two noncontiguous parcels of land under the same or separate ownership, or two contiguous parcels of land under separate ownership, the development plans for which have been submitted in tandem so as to qualify for density averaged development permission under this Section.
Perennial Stream	Streams that have flow year-round and are shown on the US Geological Survey's quadrangle as a solid blue line or as identified by the jurisdictional assessment required in this section.
Protected Area	The area adjoining and upstream of the critical area of the Water Supply Watershed in which protection measures are required. The boundaries of the protected area are defined as extending five miles upstream and draining to the portions of Lake Hickory west of the NC 127 bridge or to the ridgeline of the watershed, whichever comes first. This term also applies to any portion of the Hickory Regional Planning Area located in the Jacobs Fork Water Supply Watershed for the application of watershed protection overlay district regulations.
Undeveloped Parcel	The parcel in a parcel pair that is not developed.
Water Dependent Structure	Any structure for which the use requires access to or proximity to or siting within surface waters to fulfill its basic purpose, such as boat ramps, boathouses, docks and bulkheads. Ancillary facilities such as restaurants, outlets for boat supplies, parking lots and commercial boat storage areas are not water dependent structures.
Watershed	The entire land area contributing surface drainage to a specific point (e.g., the water supply).

#### 4.5.5 Prohibited Uses in the Critical Area

Within the critical area, sanitary landfills and new sites for land application of sludge/residuals or petroleum contaminated soils are prohibited.

#### 4.5.6 Restrictions on Uses within the Protected and Critical Areas

- A. Within the critical area, agriculture is subject to the provisions of the Food Security Act of 1985 and the Food, Agriculture, Conservation and Trade Act of 1990.
- B. Agricultural activities must maintain a minimum 10 foot wide vegetated buffer or equivalent control as determined by the Soil and Water Conservation Commission, along all perennial waters as shown on the official zoning atlas.
- C. Animal operations greater than 100 animal units shall employ best management practices by July 1, 1994. The Soil and Water Conservation Commission is responsible for implementing these provisions pertaining to agricultural activities.
- D. Silviculture activities shall be subject to the provisions of the Forest Practices Guidelines Related to Water Quality (15A NCAC 1 I .0101 .0209). The North Carolina Division of Forest Resources is responsible for implementing these provisions pertaining to silviculture activities.
- E. New nonresidential development within watershed areas shall incorporate adequately designed, constructed and maintained spill containment structures if hazardous materials are either used, stored or manufactured on the premises.
- F. The construction of new roads and bridges and nonresidential development shall minimize built upon area, divert stormwater away from surface water supply waters as much as possible, and employ best management practices (BMP's) to minimize water quality impacts.

- G. Road construction shall use BMP's outlined in the North Carolina Department of Transportation document entitled, "Best Management Practices for the Protection of Surface Waters."

#### 4.5.7 Density Requirements

Within the protected and critical areas, the following density and impervious coverage limits shall apply to new development that is not otherwise exempted by Section 4.5.2 above:

A. Low Density Option (WS-III)

- (1) New development under the low-density option is not required to provide BMPs meeting the design standards of the NCDENR, DWQ as the primary treatment system for stormwater runoff.
- (2) Within the critical area, residential uses are allowed at a maximum density of 1 dwelling unit per acre; other residential and all nonresidential development shall be subject to a maximum impervious coverage limit of 12 percent. Stormwater runoff from the development shall be transported by vegetated conveyances to the maximum extent practicable.
- (3) Within the protected area, single-family detached residential projects are allowed at a maximum density of 2 dwelling units per acre; all other residential and all nonresidential development shall be subject to a maximum impervious coverage limit of 24 percent. Stormwater runoff from the development shall be transported by vegetated conveyances to the maximum extent practicable.

B. Low-Density Option (WS-IV)

- (1) New development under the low-density option is not required to provide BMPs meeting the design standards of the NCDENR, DWQ as the primary treatment system for stormwater runoff.
- (2) Within the critical area, residential uses are allowed at a maximum density of 2 dwelling units per acre; other residential and all nonresidential development shall be subject to a maximum impervious coverage limit of 24 percent. Stormwater runoff from the development shall be transported by vegetated conveyances to the maximum extent practicable.
- (3) Within the protected area, residential projects utilizing curbs and gutters are allowed at a maximum density of 2 dwelling units per acre; other residential and all nonresidential development shall be subject to a maximum impervious coverage limit of 24 percent. Stormwater runoff from the development shall be transported by vegetated conveyances to the maximum extent practicable.

C. High Density Option (WS-III)

- (1) New development under the high-density option must employ BMPs, or alternative stormwater management systems consisting of other treatment options, or a combination of treatment options approved by the NCDENR, DWQ.
- (2) BMPs engineered to control and treat the first one inch of rainfall, designed by a North Carolina registered professional engineer and meeting the design standards of the NCDENR, DWQ, must be employed under the high-density option as the primary treatment system for stormwater runoff.
- (3) Under the high-density option, maximum impervious coverage shall not exceed 30 percent in the critical area or 50 percent in the protected area on a project-by-

project basis. The exposed surface area in plain view of a BMP may be considered pervious when computing impervious area.

**D. High Density Option (WS-IV)**

- (1) New development under the high-density option must employ BMPs, or alternative stormwater management systems consisting of other treatment options, or a combination of treatment options approved by the NCDENR, DWQ.
- (2) BMPs engineered to control and treat the first one inch of rainfall, designed by a North Carolina registered professional engineer and meeting the design standards of the NCDENR, DWQ, must be employed under the high-density option as the primary treatment system for stormwater runoff.
- (3) Under the high-density option, maximum impervious coverage shall not exceed 50 percent in the critical area or 70 percent in the protected area on a project-by-project basis. The exposed surface area in plain view of a BMP may be considered pervious when computing impervious area.

**4.5.8 Cluster Development**

Clustering of development is permitted on a project-by-project basis in protected and critical areas, subject to Sec. 8.8 and Article 5 and the following conditions:

- A. Minimum lot sizes are not applicable to single family dwelling cluster development projects; however, under the low-density option, the number of single family dwelling lots shall not exceed the number of lots allowed under the low-density option (See Sec. 4.5.7).
- B. All impervious coverage areas shall be designed and located to minimize stormwater runoff impact to the receiving waters and to minimize concentrated stormwater flow.
- C. The remainder of the tract shall remain in a vegetated or natural state. Agreements satisfactory to the City Attorney for assuring that the remainder of the tract is held, improved and maintained as open space shall be required.

**4.5.9 Planned Developments**

Planned developments shall be treated as a single property where development-wide stormwater and erosion control measures are utilized. Project densities and impervious coverage may be calculated on a development-wide basis for such projects.

**4.5.10 Buffer Areas Required**

A minimum 100-foot vegetative buffer is required for all new high-density development activities and a minimum 30-foot vegetative buffer is required for all new low-density development activities along all indicated perennial waters within the WP-O district. No new development is permitted within the buffer except for artificial stream bank or shoreline stabilization, water dependent structures and public or private projects such as road crossings or greenways where no practical alternatives exist. Activities within buffer areas shall minimize impervious coverage area, direct runoff away from surface waters and maximize the utilization of stormwater best management practices.

**4.5.11 Application Submittal Requirements**

In addition to the information otherwise required to be submitted with Zoning Compliance Permits, the following information shall be required to be submitted with Zoning Compliance Permit applications for all projects within the WP-O district:

- A. The square footage and percent of impervious coverage area.
- B. For residential projects, total dwelling units and dwelling units per acre.
- C. The accurate location of all perennial streams and natural drainage areas on the property.
- D. The location and landscaping proposed for all required buffer areas.
- E. For high density projects, copies of the development plan including a location map, adjoining property owners, lot dimensions, and rights of way; the accurate location of all existing and proposed buildings and other structures, and the location and size in square feet of all impervious coverage areas. In cases where the developer intends to sell development rights to a third party or subdivide the property, the plan must specify the maximum allowed impervious coverage area for each parcel or tract.
- F. For high density projects, the location of any stormwater BMPs and copies of the plans and specifications for any stormwater BMPs designed and sealed by a North Carolina registered professional engineer with qualifications appropriate for the type of system required.
- G. Copies of the plans and specifications for proposed drainage facilities, including approximate location and dimensions of open drainage ways, storm drains, culverts, stormwater BMPs or areas where water is to be diverted through grading, designed either by a North Carolina Registered Engineer or Landscape Architect, to the extent that the North Carolina General Statutes, Chapter 89A, allow.
- H. Written verification that a soil erosion and sedimentation control plan has been submitted to and approved by the appropriate state or local agency.
- I. Permit application fees as set by the Hickory City Council.
- J. For high density projects, a legal description of the area containing the stormwater BMPs and providing access to said BMPs shall be prepared as an easement to be filed with the Register of Deeds. The easement shall include the BMPs, vegetative filters, all pipes and water control structures, berms dikes, and area necessary to perform inspections, maintenance and repair.
- K. For high-density option projects, the proposed security performance bond or other security to provide adequate financial assurance for the construction of the BMPs and associated stormwater control structures.
- L. For high density option projects, the Proposed Operation and Maintenance Agreement between the City of Hickory and the owning entity to maintain, repair and if necessary, reconstruct the BMPs and its associated stormwater control structures in accordance with the operation and management plan and manual provided by the developer.
- M. For high density option projects, an operation and maintenance plan and manual indicating what operation and maintenance actions are needed, what specific quantitative criteria will be used to determine when those actions are to be taken and who is responsible for those actions. The plan shall clearly indicate the steps that will be taken for restoring the BMPs to design specifications if a failure occurs.

#### 4.5.12 Density Averaging (TA 14-01)

Density averaging involves the use of two (2) noncontiguous parcels and is based on the premise the development plans for a pair of parcels can be submitted together and treated as a single project for purposes of these regulations. The amount of development allowed for the paired

parcel taken together cannot exceed the amount of development that would be allowed if the parcels were developed separately.

- A. A Special Use Permit shall be obtained from the Planning Commission sitting as the Watershed Review Board to ensure that both parcels considered together meet the standards of the ordinance and that potential buyers have notice of how the watershed regulations were applied to the parcel pair. Only owners of both of the paired parcels may submit the application for Special Use Permit. A site plan for both parcels must be submitted and approved as part of the Special Use Permit. If such a permit is granted, no change in the development proposal authorized for either parcel shall be made unless the permit is amended. Included with the Special Use Permit will be a site plan, registered plats for both properties, a description of both properties and documentation reflecting the development restrictions to the parcel pair that will remain undeveloped. A metes and bounds description of the areas to remain vegetated and limits on use shall be recorded on the subdivision plat, in homeowners' covenants and on individual deeds, and shall be irrevocable.
- B. A Special Use Permit for Density Averaging shall be considered if the following exist:
  - (1) Parcels pairs being submitted for approval under this provision shall be submitted for development approval as a single unitary proposal.
  - (2) Sufficient information shall be submitted so that it may be determined that the density of the paired parcels, calculated either by dwelling units per acre or built upon area, shall not exceed the density that would be allowed if the parcels were developed separately. The paired parcels shall be located within the same water supply watershed and preferably in the same drainage area of the watershed. Parcels to be used in pairs may be located in the Protected or Critical Areas. However, if one of the parcels is located in the Critical Area and one is located in the Protected Area the Critical Area parcel shall not be developed beyond the applicable density requirements for its classification.
  - (3) Vegetative buffers shall at a minimum meet the appropriate minimum statewide water supply watershed protection requirements on both parcels in the parcel pair according to the density of development occurring on each parcel.
  - (4) Sufficient information shall be submitted so that it may be demonstrated that the parcels are designed to:
    - a. Minimize storm water runoff impact to the receiving waters by minimizing concentrated storm water flow;
    - b. Maximize the use of sheet flow through vegetated areas;
    - c. Minimize impervious surface areas;
    - d. Locate development away from surface waters and drainage ways to the maximum extent practicable; and
    - e. Convey storm water from developed areas by vegetated swales to the maximum extent practical.



- (5) The undeveloped parcel(s) or portion(s) thereof shall remain in a vegetated or natural condition and shall be placed in a permanent conservation easement.
- (6) Applicants shall agree to bind themselves and their successors in title, individually and collectively, to maintain the pattern of development proposed in perpetuity. Parties to enforcement of such agreement shall include the City of Hickory. No such agreement shall be accepted without approval of the Staff Attorney as to the legal sufficiency of the documents involved.
- (7) Undeveloped land areas proposed for incorporation into the density or impervious coverage area calculation shall meet the following criteria:
  - a. Projects in the Protected Area may incorporate undeveloped land elsewhere in the Protected Area or Critical Area of the same water supply watershed. The amount of additional undeveloped acreage required shall be determined by dividing the appropriate density or impervious coverage area factor into the number of dwelling units or impervious coverage area in excess of the amount permitted on the project site by these regulations to determine the amount of other land to be reserved as undeveloped so that the overall density or intensity of the project shall not exceed the density or intensity that would be allowed if the parcels were developed separately .
  - b. Parcels located in critical areas may not be developed beyond the applicable density requirements of its classification.
  - c. Undeveloped land included to meet the requirements of one project shall not be included as meeting the requirements of any existing or proposed project nor shall any land included in a parcel pair for which a watershed variance has been granted or would be required.
  - d. Land areas within the flooding easement of Lake Hickory may not be used for the purposes of this section.
- (8) The Planning Commission sitting as the Watershed Review Board shall make written findings supported by appropriate calculations and documentation that the plan as a whole conforms to the intent and requirements of this section, and that the proposed agreement assures protection of the public interest and achievement of the objectives of this section.
- (9) At the time of the issuance of the Zoning Compliance Permit, the Special Use Permit and conservation easement, shall be caused to be recorded by the Planning Director in the office of the appropriate Register of Deeds and filed with the offices of the Planning Director and City Clerk. Notations shall be made by the Planning Director on the official zoning atlas and the approved development plans and or plats for future guidance in administration and as a public record.
- (10) The pattern of development and the agreement between the owners shall not be changed except by the issuance of a new or amended Special Use Permit in the manner herein established.

#### 4.5.13 Financial Security

- A. All new BMPs and stormwater control structures shall be conditioned on the posting of adequate financial assurance for the purpose of construction, maintenance, repairs or reconstruction necessary for adequate performance of the BMPs and stormwater control structures.
- B. Financial assurance shall be in the form of the following:
  - (1) Construction Security Performance Bond or Other Security

The permit applicant shall choose and obtain either a construction performance bond from a surety bonding company authorized to do business in North Carolina, an irrevocable letter of credit or other instrument readily convertible into cash at face value payable to the City of Hickory or placed in escrow with a financial institution designated as an official depository of the City of Hickory. The bond or other instrument shall be in an amount equal to 1.25 times the total cost of the stormwater control structure, as estimated by the applicant and approved by the City Engineer. The total cost of the stormwater control structure shall include the value of all materials such as piping and other structures; seeding and soil stabilization; design and engineering; and grading, excavation, fill, etc. The costs shall not be prorated as part of a larger project, but rather under the assumption of an independent mobilization.
  - (2) Maintenance Security

A maintenance security bond, irrevocable letter of credit, or other instrument (as mentioned above) shall be obtained by the permit applicant/owner. The bond or other instrument shall be in an amount determined by the City Engineer. The maintenance security shall be required to ensure that the owner takes the necessary actions to inspect, maintain, repair, and if necessary reconstruct the BMPs and stormwater control structures. The maintenance security must be submitted to the City Engineer before a permanent certificate of occupancy can be issued.
  - (3) Operation and Maintenance Agreement

The permit applicant shall enter into a binding Operation and Maintenance Agreement between the City of Hickory and all interests in the development. The agreement shall require the owning entity to inspect, maintain, repair and, if necessary, reconstruct the BMPs and stormwater control structures in accordance with the Operation and Maintenance Agreement and Manual provided by the developer. The Operation and Maintenance Agreement and Manual shall be filed with the Register of Deeds by the Legal Department, at the owner's expense. The Operation and Maintenance Agreement and Manual must be submitted to and approved by the City before a permanent certificate of occupancy can be issued.
  - (4) Default Under Performance Bond Option

Upon default of the permit applicant to complete and/or maintain the BMPs and stormwater control structures as spelled out in the performance bond or other security, the City may obtain and use all or any portion of the funds necessary to complete and/or maintain the BMPs and stormwater control structures. The City shall return any funds not spent in completing the improvements to the owning entity.

(5) Default Under Cash Security Option

Upon default of the owning entity to construct, maintain, repair and, if necessary, reconstruct the BMPs and stormwater control structures in accordance with the plans and specifications or Operation and Maintenance Agreement and Manual, the City shall obtain and use all or any portion of the cash security to make necessary improvements based on an engineering estimate. Such expenditure of funds shall only be made after exhausting all other reasonable remedies seeking the owing entity to comply with the plans and specifications and the terms and conditions of the Operation and Maintenance Agreement and Manual. The City shall return any funds not spent in completing the improvements to the owning entity.

4.5.14 Maintenance and Upkeep

- A. An Operation and Maintenance Agreement and Manual shall be provided by the developer for each BMP and stormwater control structure, indicating what operation and maintenance actions are needed, what specific quantitative criteria will be used for determining when those actions are to be taken, and consistent with the Operation and Maintenance Agreement, who is responsible for those actions. The plan shall clearly indicate the steps that will be taken for restoring a BMP and stormwater control structure to design specifications if a failure occurs.
- B. Landscaping and grounds management shall be the responsibility of the owning entity. However, vegetation shall not be established or allowed to mature to the extent that the integrity of the BMP and stormwater control structure is diminished or threatened, or to the extent of interfering with any easement or access to the BMP and stormwater control structure.
- C. Except for general landscaping and grounds management, the owning entity shall notify the City Engineer prior to any repair or reconstruction of the BMP and stormwater control structure. All improvements shall be made consistent with the approved plans and specifications of the BMP and stormwater control structure and the Operation and Maintenance Agreement and Manual. After notification by the owning entity, the City Engineer may inspect the completed improvements and if necessary inform the owning entity of any required additions, changes or modifications and of the time period to complete said improvements.
- D. Amendments to the plans and specifications of the stormwater control structure and/or the Operation and Maintenance Agreement and Manual shall be approved by the City Engineer. Proposed changes shall be prepared by a North Carolina registered professional engineer or landscape architect (to the extent that the General Statutes, Chapter 89A allow) and submitted to, and reviewed by the City Engineer.
- E. If the City Engineer finds that the operation and maintenance plan and manual is inadequate for any reason, the City Engineer shall notify the owning entity of any required changes.

4.5.15 Application and Inspection Fees

- A. Processing and inspection fees shall be submitted in the form of a check or money order made payable to the City of Hickory. Applications shall be returned if not accompanied by the required fee.
- B. A permit and inspection fee schedule, as approved by the City of Hickory, shall be posted in the Office of the Planning Director.

- C. Inspection fees shall be valid for 60 days. An inspection fee shall be required when improvements are made to the BMP and stormwater control structure except in the case when a similar fee has been paid within the last 60 days.

#### 4.5.16 Inspections and Release of the Construction Performance Bond

- A. The City Engineer shall inspect the BMP and stormwater control structure, after the owner notifies the City Engineer that all work has been completed. After this inspection is completed the owning entity shall provide:
  - (1) The necessary easements and final survey plat for the BMP and stormwater control structure ready for filing with the Register of Deeds;
  - (2) A certification and as-built drawings sealed by an engineer or landscape architect (to the extent that the General Statutes, Chapter 89A allow) stating that the BMP and stormwater control structure is complete and consistent with the approved plans and specifications.
  - (3) A maintenance security in an amount approved by the City Engineer.
- B. The City Engineer shall review the materials submitted by the developer and the final inspection report.
  - (1) If the City Engineer approves the final inspection report and accepts the certification, as-built, and easements; the City shall file the easements with the Register of Deeds, at the owner's expense and release the performance bond or other security and issue a Certificate of Watershed Protection Compliance for the BMP and stormwater control structure.
  - (2) If deficiencies are found, the City Engineer shall direct that improvements and inspections be made and/or documents corrected and resubmitted before a permanent certificate of occupancy can be issued.

#### 4.5.17 Annual Inspections

- A. All BMPs and stormwater control structures shall be inspected on an annual basis by a qualified professional to determine whether the BMPs and stormwater control are performing as designed and intended. Records of inspection shall be recorded and submitted on forms supplied by the City Engineer. The annual inspection report shall be submitted to the City Engineer on/or before the first and each subsequent anniversary of the as-built certification.
- B. The inspection report must indicate the status of each item inspected, and any maintenance that was conducted or repairs that were made as a result of the inspection.

#### 4.5.18 BMP's and Stormwater Control Structures

- A. All BMPs and Stormwater control structures shall be designed by either a North Carolina registered professional engineer or landscape architect to the extent that the General Statutes, Chapter 89A allow. Other stormwater drainage systems shall be designed by a North Carolina registered professional with qualifications appropriate for the type of system required; these registered professionals are defined as professional engineers, landscape architects to the extent that the General Statutes, Chapter 89A allow and land surveyors, as provided in General Statutes 89(C) 3(7).
- B. All BMPs and stormwater control structures shall be designed in accordance with the requirements of the North Carolina Department of Environment and Natural Resources (NCDENR) BMP Design Manual, latest edition.

- C. All land areas outside of the BMPs and stormwater control structures shall be provided with a ground cover sufficient to restrain erosion after any land disturbance. Upon completion of the BMPs and stormwater control structures, a permanent ground cover shall be established and maintained as part of the maintenance agreement.
- D. A description of the area containing the BMPs and stormwater control structures shall be prepared and filed as a separate easement with the Register of Deeds along with any easements necessary for general access to the BMPs and stormwater control structure. The easement area shall include the BMPs and stormwater control structures, berms, dikes, etc., and sufficient area to perform inspections, maintenance, repairs and reconstruction.