

ARTICLE 1. GENERAL PROVISIONS

Section 1. Effective Date

This Ordinance shall be in full force and effect on and after _____.

Section 2. Stormwater Design Manual

Union County may furnish additional policy, criteria, and information, including specifications and standards, for the proper implementation of the requirements of this Ordinance and may provide such information in the form of a Stormwater Design Manual. This manual will include a list of acceptable stormwater treatment practices, including the specific design criteria and operation and maintenance requirements for each stormwater practice. The manual may be updated and expanded from time to time, at the discretion of the *Board of Commissioners or delegated official(s)*, based on improvements in engineering, science, monitoring, and local maintenance experience. Stormwater treatment practices that are designed and constructed in accordance with these designs and sizing criteria will be presumed to meet the minimum water quality performance standards.

Section 3. Definitions

For the purpose of this section, unless the context clearly indicates otherwise, the following terms, phrases and words, and their derivatives, shall have the meaning given herein:

- (a) *Built-Upon Area:* That portion of a development project that is covered by impervious or partially impervious cover, including buildings, pavement, gravel (for pedestrian or vehicular use), recreation facilities (e.g., tennis courts), etc. (Note: neither slatted decks nor the water area of a swimming pool are considered built-upon areas.)
- (b) *Channel:* A natural or artificial watercourse with a definite bed and banks that conducts continuously or periodically flowing water.
- (c) *Connection:* Any ditch, pipe, channel, berm, or other device for the diversion or transmission of storm drainage that will in any way affect the operation or maintenance of a storm sewer.
- (d) *Conveyance:* Any feature of the landscape or earth, manmade or natural, which carries water in a concentrated flow.
- (e) *Design Storm:* The specific frequency and, if necessary, duration of the rainfall event to be used in design to meet the criteria established in this Ordinance.
- (f) *Detention:* To store and slowly release storm water runoff following precipitation by means of a surface depression or tank and an outlet structure. Detention structures are commonly used for pollutant removal, water storage, and peak flow reduction.

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- (g) *Discharge*: Addition of pollutants into waters of the U.S. from 1) surface runoff which is collected or channeled by man; 2) discharges through pipes, sewers, or other conveyance owned by a state, municipality, or other person which does not lead to a treatment works; and 3) discharges through pipes, sewers, or other conveyance, leading into privately owned treatment works. [Ref: 40 CFR § 122.2].
- (h) *Ditch/Swale*: An open channel, excavated path, or constructed pathway that infiltrates and/or transports runoff waters.
- (i) *Drainage*: The flow of stormwater into a conveyance.
- (j) *Drainage Easement*: An easement that grants to the public the right of access for the purpose of maintaining conveyances or drainage structures.
- (k) *Easement*: A grant of one or more of the property rights by the property owner, to, or for use by the public.
- (l) *Erosion*: The wearing away of soil from the land surface by the action of wind, water, gravity, or any combination thereof.
- (m) *Flood Fringe Area*: The land area located between the floodway encroachment lines and the line depicting the maximum elevation subject to inundation by the base flood (100-year flood). Floodway elevations are to be based upon existing FEMA studies or new studies developed where FEMA mapping is not available.
- (n) *Impervious Surface*: An area composed of any material that impedes or prevents natural infiltration of water into the soil. A list of impervious areas includes but is not limited to, roofs, decks (other than slatted decks), driveways, patios, sidewalks, parking areas, tennis courts, concrete or asphalt streets, crushed stones and gravel surfaces.
- (o) *Infiltration*: The replenishment of underground water reserves by the movement of stormwater through the soil.
- (p) *Mitigation*: Actions taken to offset the effects of temporary or permanent loss of the buffer or stream.
- (q) *Municipal Separate Storm Sewer System (MS4)*: A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) owned by a state, city, town or other public body, that is designed or used for collecting or conveying storm water, which is not a combined sewer, and which is not part of a publicly owned treatment works. [Ref. 40 CFR 122.26 (b) (8)].
- (r) *National Pollutant Discharge Elimination System (NPDES)*: A permitting system established by Section 402 of the Clean Water Act for discharges directly to the surface waters of the U.S. The State of North Carolina issues NPDES permits under authority of the U.S. Environmental Protection Agency.

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- (s) *New Development*: Any activity for which a building permit is required (e.g., construction of buildings and other structures), or any of the following without regard to a permit requirement: clearing, stripping, grubbing, dredging, grading, paving, gravel placement, excavating, transporting, and filling of land.
- (t) *Non-Point Source*: A source of drainage into watercourses that enters the watercourse relatively in even quantity all along the edge of the watercourse, as opposed to entering the watercourse at an identifiable point such as a pipe or ditch outlet.
- (u) *Non-Structural Stormwater Management Facility*: A stormwater management device or approach that does not involve the alteration of the land surface or construction of a facility.
- (v) *NPDES Phase II Regulations*: The “National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharge.” [Ref. CFR Part II 40 CFR Parts 9, 122, 123 and 124]
- (w) *Outfall*: A point source where a municipal separate storm sewer discharges to waters of the U.S., and does not include open conveyances connecting two municipal separate storm sewers, pipes, tunnels, or other conveyances which connect segments of the same stream or other waters of the U.S. and are used to convey waters of the U.S. [Ref. 40 CFR 122.26 (b) (9)].
- (x) *Redevelopment*: Any rebuilding activity other than a rebuilding activity that results in no net increase in built-upon area and provides equal or greater stormwater control than the previous development.
- (y) *Refuse*: Solid waste including, but not limited to, garbage, rubbish, discarded plant material, and ashes.
- (z) *Riparian Buffer*: A width of land immediately adjacent to a watercourse within which development is limited or restricted. This area is to be preserved in its natural condition for the infiltration and treatment of stormwater runoff.
- (aa) *Sheet Flow*: The even flow of water across the land surface so that there is no discernable ‘concentration’ of water.
- (bb) *Soil Erosion and Sedimentation Control Plan*: The graphic plan including narrative where appropriate required by the State of North Carolina as a prerequisite for a construction permit. The purpose of this plan is to explain existing conditions and proposed grading of land including any development and to describe the activities and measure to be undertaken to control accelerated soil erosion and sedimentation.
- (cc) *Stormwater*: Stormwater runoff, snow melt runoff, and surface runoff and drainage. [Ref. 40 CFR 122.26 (b) (13)].

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- (dd) *Stormwater Design Manual:* A manual of technical design requirements, administrative procedures, and design policies for stormwater management developed and published by Union County.
- (ee) *Stormwater Management:* The use of structural or non-structural practices that are designed to reduce stormwater runoff pollutant loads, discharge volumes, peak flow discharge rates, and detrimental changes that affect water quality and habitat.
- (ff) *Structural Stormwater Management Improvement:* A constructed facility for the purpose of managing stormwater flow and quality.
- (gg) *Total Suspended Solids:* Total suspended matter in water, which is commonly expressed as a concentration in terms of milligrams per liter (mg/L) or parts per million (ppm).
- (hh) *Water Supply Watershed Overlay District:* An area of land within Union County established by the Union County Board of Commissioners for the protection of water supply watersheds, as more fully defined and described in Article XXI of the Union County Land Use Ordinance.

Section 4. Acronyms

<i>BMP</i>	Best Management Practice
<i>CFR</i>	Code of Federal Regulations
<i>CWA</i>	Clean Water Act, 33 U.S.C. §1251 et seq.
<i>DENR</i>	North Carolina Department of Environment and Natural Resources
<i>DWQ</i>	North Carolina Division of Water Quality
<i>EPA</i>	Environmental Protection Agency
<i>MS4</i>	Municipal Separate Storm Sewer System
<i>NCGS</i>	North Carolina General Statutes
<i>NPDES</i>	National Pollutant Discharge Elimination System
<i>WSWOD</i>	Water Supply Watershed Overlay District

ARTICLE 2. ADMINISTRATION, PROCEDURES, AND STANDARDS

Section 5. Duties of Stormwater Administrator

The Stormwater Administrator shall have the following duties under this ordinance:

- (a) *To make determinations and render interpretations of this ordinance.*
- (b) *To require stormwater runoff control measures for projects without any measures and to require additional stormwater runoff control measures for projects which are complying with Section 14 if stormwater runoff from the project will cause adverse effects on other properties.*

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- (c) *To take any other action necessary to administer the provisions of this ordinance.*

In cases when a written notice of violation of any provision of this Ordinance would cause a delay that would seriously threaten the effective enforcement of this Ordinance, or endanger life, property, or both or that such endangerment is imminent, the Stormwater Administrator may seek enforcement without prior written notice for immediate action.

Section 6. General Drainage Requirements

- (a) *To the extent practicable, all development shall conform to the existing, natural contours of the land, and pre-existing natural and man-made drainage ways shall remain undisturbed unless approved by the County.*
- (b) *To the extent practicable, lot boundaries within subdivisions shall coincide with pre-existing natural and man-made drainage ways so that development of the lot does not require the alteration of natural drainage ways.*
- (c) *No stormwater runoff may be channeled or otherwise directed into a sanitary sewer.*
- (d) *All developments shall be provided with a drainage system that is adequate to prevent the undue retention of surface water on the development site. Surface water shall not be regarded as unduly retained if:*
 - i. *The retention results from a technique, practice or device deliberately installed as part of an approved sedimentation or storm water runoff control plan; or*
 - ii. *The retention is not substantially different in location or degree than that experienced by the development site in its pre-development stage, unless such retention presents a danger to health or safety.*
- (e) *Whenever practicable, the drainage system of a development shall coordinate with and connect to the drainage systems or drainage ways on surrounding properties or street.*
- (f) *Use of drainage swales rather than curb and gutter and storm sewers in subdivisions is provided for in Section 216. Private roads and access ways within un-subdivided developments shall utilize curb and gutter and storm drains to provide adequate drainage if the grade of such roads or access ways is too steep to provide drainage in another manner or if other sufficient reasons exist to require such construction.*

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- (g) *Construction specifications for drainage swales, curbs and gutters, and storm drains are contained in Section 209 and Appendix C of the Land Use Ordinance and the Union County Stormwater Design Manual.*
- (h) *All developments shall be constructed and maintained so that adjacent properties are not unreasonably burdened with surface waters as a result of such developments. More specifically:*
 - i. *No development may be constructed or maintained so that such development impedes the natural flow of water from higher adjacent properties across such development, thereby causing damage to such higher adjacent properties; and*
 - ii. *No development may be constructed or maintained so that surface waters from such development are collected and channeled onto lower adjacent properties at such locations or at such volumes as to cause damage to such lower adjacent properties.*
 - iii. *When development of an area changes the flow regime from sheet flow to concentrated flow, the drainage system should be designed to minimize impacts of the concentrated flow on adjacent properties. Examples include but are not limited to dissipaters, converting the concentrated flow to diffuse flow, bio-retention, etc.*
- (i) *Public drainage easements shall be:*
 - i. *Free from any fill, obstruction, blockage, or alterations that will impede or divert the flow of water or interfere with access to the storm drainage system. This includes but is not limited to sidewalks, driveways, impervious surfaces, patios, decks, pools, air conditioners, structures, utility sheds, poles, fences, sprinkler systems, trees, shrubs, hedges, yard debris, trash and landscaping plants other than grass.*
 - ii. *Established and recorded on the plans for storm drainage pipes, drainage ways, stormwater management facilities, area of ponded water, and enough area for access and maintenance.*
 - iii. *Recorded on all final plats and each lot affected by the easement with the Union County Register of Deeds.*

Section 7. Riparian Buffer Requirements

- (a) *Riparian buffers with minimum widths as specified in Table 1. Riparian Buffer Setback Dimensions below shall be maintained along all perennial and intermittent streams.*

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- (b) *The Owner shall obtain an on-site determination from the US Army Corp of Engineers, North Carolina DENR – DWQ, or a qualified professional for the presence of surface waters and required approval for any impacts to those surface waters (streams, wetlands, ponds, swamps, etc.) from the governing agency. A copy of the determination and approval shall be filed with the Stormwater Administrator.*
- (c) Ponds (including aesthetic), wetlands, and lakes which intersect the stream channel or are located within the riparian buffer shall have the same buffers as the original impaired zone(s) measured horizontally from the top of the bank of the pond and perpendicular to the water body’s edge.
- (d) Where multiple riparian buffer requirements exist, such as in “Water Supply Watershed Overlay Districts” and “Conservation Area Designations,” the stricter requirements will apply.
- (e) *Subject to subsection (f) of this section, placement of fill material, permanent structures, and sanitary sewage treatment ground absorption systems in the riparian buffers is strictly prohibited.*
- (f) The riparian buffer width shall consist of two zones on each side of the watercourse or drainage channel.
 - i. The Streamside Zone shall consist of an undisturbed strip of land measured horizontally away from the top of the stream (channel) bank and perpendicular to the stream centerline (or from the edge of contiguous sensitive areas, e.g., wetlands). The Streamside Zone is to remain undisturbed except for those activities associated with the exempted uses below:
 - Limited crossings for driveways, streets, roads, highways, and railroad crossings and associated bridge components.
 - Overhead and underground utility crossings where crossings should be made perpendicular to the stream to the extent practicable.
 - Gravity flow municipal sanitary sewers where no practicable alternative exists.
 - Stormwater management facilities where no practicable alternative exists.
 - Fences provided that disturbance is minimized and where installation does not result in the removal of vegetation.
 - Dam maintenance activities of existing dams.
 - Stream restoration activities.
 - Water dependent structures.
 - ii. The Upland Zone shall consist of a stable, vegetative strip of land beginning at the outer edge of the Streamside Zone measured horizontally away from the edge of the Streamside Zone and perpendicular to the stream centerline. The following activities associated with the uses below are exempted in the Upland Zone:

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- Activities associated with exempted uses in the Streamside Zone.
 - Unoccupied storage buildings and/or roofed, hard surface areas less than 150 square feet in area.
 - Grading performed in manner as not to damage vegetation and root systems of trees located in the Streamside Zone.
 - Stormwater best management practices.
 - Greenway paths, hiking trails, bicycle paths, and other pedestrian transportation corridors.
 - Recreational equipment and structures such as playground equipment and gazebos, as long as pervious ground cover is restored.
- (g) The required riparian buffer widths on each side of the watercourse shall be in accordance with Table 1.

Table 1. Riparian Buffer Setback Dimensions

Riparian Conditions	Stream Jurisdiction	Streamside Zone	Upland Zone	Total
Countywide	Intermittent	30'	0	30'
	Perennial	30'	20'	50'
	<i>Perennial (Drainage Area > 640 acres)</i>	50'	50' ^[1]	100' ^[1]
Duck, Goose, Waxhaw Creek Basins	Intermittent	100'	0 ^[1]	100' ^[1]
	Perennial	200'	0 ^[1]	200' ^[1]

^[1] Plus 85% of the remaining flood fringe area

- (h) The outside riparian buffer boundary must be clearly marked by orange fabric fencing prior to any land-disturbing activities at the site, and this fencing must be noted on all plans.
- (i) Riparian buffer areas shall be shown to the active top of stream bank on recorded property plats and labeled as “Area Not to be Disturbed.”
- (j) The Owner will be required to maintain stormwater as sheet flow throughout the entire riparian buffer in order to provide for diffusion and infiltration of runoff plus the filtering out of pollutants before they reach the watercourse. Concentrated stormwater from new ditches or manmade conveyances shall be converted to sheet flow before entering either Zone of the riparian buffer.

- (k) Notwithstanding the other provisions of this section, the permit issuing authority may approve disturbances of the riparian buffer for activities not listed above if the developer utilizes mitigation techniques that provide benefits that fully offset the loss of the area of riparian buffer that is disturbed. Mitigation techniques may include but are not limited to the preservation, restoration, and/or protection of natural riparian buffers, streams, wetlands, or open spaces. Mitigation techniques must take place on the development site, and shall not include monetary payments or mitigation efforts on other sites.

ARTICLE 3. STORMWATER MANAGEMENT PROGRAM DEFINED

Section 8. Applicability

The provisions of this Article shall apply to all new development and redevelopment projects, including single-family detached homes, that:

- (a) *Cumulatively disturbs one acre or more; or*
- (b) *Are less than an acre but are part of a larger common plan of development or sale; or*
- (c) *Create a total impervious surface area greater than 20,000 square feet.*

Section 9. Stormwater Approval

Except where provided elsewhere, development shall not commence without obtaining Stormwater *Approval* pursuant to the provisions of this Ordinance.

Developments that meet or exceed the conditions in Section 12 shall apply for a Stormwater Approval, as follows, to be provided by the Stormwater Administrator:

- (a) *Stormwater Approval* shall be accompanied with the information identified in this Ordinance and Stormwater Design Manual *and* shall not be issued until the following conditions are met:
 - i. Submission and approval by the Stormwater Administrator of the Stormwater Management Plan and supporting information.
 - ii. Submission and approval of any required easements.
 - iii. Submission and approval of any required inspection and maintenance agreements.
 - iv. Payment of all fees.

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- (b) If the development requires a Sediment and Erosion Control Permit, the Stormwater *Approval* will be conditional upon the Owner receiving such Sediment and Erosion Permit and upon the filing of a copy of the approved Sediment and Erosion Control Plan and associated Permit with the Stormwater Administrator.
- (c) The Stormwater *Approval* will be valid until changes in the *drainage or stormwater conveyance system for the development* are made. If changes are made, the original Stormwater *Approval* shall not be valid and a new *approval* shall be required.

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

Section 10. Stormwater Runoff Control Requirements

Stormwater shall be conveyed through the development in an adequately designed drainage system of natural drainage ways, swales, storm sewers, culverts, inlets, channels, BMPs, and stormwater management facilities. Drainage systems shall be designed, constructed, and maintained so as to provide natural infiltration, control velocity, control flooding, extend the time of concentration of stormwater runoff, and to control to the maximum extent practicable the impacts of development.

- (a) *A single-family detached subdivision is required to analyze the effects of the increased runoff up to the point where the post-construction discharge is 10% of the receiving stream base flow for the design storm. Efforts shall be taken to mitigate any adverse effects on downstream structures, culverts, and other potentially harmful effects.*
- (b) *Stormwater control measures used for sedimentation and erosion control during the construction phase shall:*
 - i. Meet the requirements of this Ordinance.*
 - ii. Be cleaned out and returned to their designed state.*
- (c) Plans shall demonstrate adequacy to convey upstream stormwater runoff through the development as guided by this Ordinance, *Stormwater Design Manual* and the Union County Land Use Plan (LUP). All designs will assume build-out conditions for the drainage basin based on the LUP at the time of development *and must take into account the runoff at the ultimate built-out potential from all surfaces draining to the system, including any off-site drainage.*
- (d) For all Stormwater Management Plans, a hydrologic-hydraulic analysis of the site drainage system in the pre-development condition and the post-development condition for both design storm events shall be submitted to the County. The

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analysis will demonstrate that the stormwater management requirements stated in this section will be achieved by the proposed facilities. The analysis will be subject to the review and approval of the County.

- (e) For all Stormwater Management Plans, a hydrologic-hydraulic analysis of the site drainage system for the 100-year storm *event* shall be performed to identify the *extent of the 100-year flood elevations within the development*. Areas that drain more than 50 cfs during a 100-year storm are required to show the 100-year storm flood elevations on all recorded plats. The analysis will be subject to the review and approval of the County. *If base flood elevations have been established, an analysis is not required.*
- (f) A development that meets the requirements for being an Integrated Multi-Use Development, Planned Urban Development, phased development, or group development can meet the requirements of this section at the point or points the stormwater runoff leaves the overall property.
- (g) *Stormwater runoff from all residential and non-residential development that contain no more than 24 percent built-upon area shall be transported from the development by vegetated conveyances to the maximum extent practicable. The County encourages the use of structural and non-structural Best Management Practices to reduce the impacts of development.*
- (h) All residential and non-residential development that exceed 24 percent built-upon area shall *implement stormwater control measures that comply with the following standards:*
 - i. The peak stormwater runoff rate for the design storm events including the 1- and 10-year, 24-hour rainfall events shall be no greater for post-development conditions than pre-development conditions at the property boundary. The Owner shall submit a certification, by a currently licensed professional in accordance with North Carolina law, that the proposed development will not cause increased peak runoff rates for the design storm events. The same methodologies used to calculate stormwater runoff must be used for both pre-development and post-development conditions.*
 - ii. If it can be demonstrated that the runoff limitations in subsection (i.) above would result in greater adverse downstream impact, such as local flooding, compliance with subsection (i.) may not be required.*
 - iii. Control and treat the difference in stormwater runoff volume leaving the project site between the pre- and post-development conditions for, at a minimum, the 1-year, 24-hour storm.*

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- iv. The draw down time for the treatment volume shall be a minimum of 24 hours, but not more than 120 hours; and
- v. *All structural stormwater treatment systems, including BMPs and stormwater management facilities, used to meet the requirements of this Ordinance, shall be designed to achieve an 85% average annual removal of total suspended solids.*

Section 11. Stormwater Management Plan

The Owner must submit a Stormwater Management Plan, hereinafter (“Plan”), *demonstrating how post-development stormwater runoff will be controlled and managed, the design of all stormwater facilities and practices, and how the proposed project will meet the requirements of this ordinance. Stormwater facilities* may consist of non-structural approaches such as natural swales, depressions in the land and other natural approaches; or structural approaches such as detention structures (wet and dry basins), extended detention facilities, and alternative Best Management Practices with provisions for stormwater quantity control. A combination of non-structural and structural approaches is encouraged. A Plan, in accordance with the requirements of this Ordinance, shall be submitted to the County and shall include:

- (a) A Location Map
- (b) Site Plans showing *existing and proposed conditions, including: buildings, lots, streets, roads, contours, utilities, existing and proposed impervious surfaces, boundaries of existing predominant vegetation and proposed limits of clearing and grading.* Site plans shall be dated, indicate the scale of the drawing and indicate the direction of North. *Note: When the development includes street and utility construction, plans for public and private streets and plans for water, sanitary sewer, and storm sewer facilities shall be submitted to the County following approval by North Carolina DOT of plans for streets and roads. For each phase of the proposed construction, street and utility construction plans shall include all improvements lying within or adjacent to that phase and all water, sanitary sewer, and storm sewer lines lying outside that phase and being required to serve that phase.*
- (c) *Pre- and post-development drainage areas, including offsite drainage entering the development and flow paths.*
- (d) Existing *and proposed* drainage components, such as streams, lakes, ponds, wetlands, *culverts, ditches, swales, and soil conditions.*
- (e) Riparian buffers with zones identified *and conservation corridors*, where required.
- (f) *All* drainage and stormwater management facility easements, where required.
- (g) *100-year flood elevations and boundary, where required, floodplain/floodway limits.*

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- (h) Proposed stormwater management facilities showing contours and areas of impounded water.
- (i) Stormwater management facilities design data including:
 - i. Engineering calculations.
 - ii. Total area of proposed impervious surfaces, in square feet.
 - iii. Total disturbed land area, in square feet.
 - iv. Total drainage area upstream of each facility, in acres.
- (j) A statement as to whether the development is located within a WSWOD.
- (k) A description of any potential effects of stormwater runoff quantity and/or quality from the development on any downstream or upstream properties.
- (l) *Data demonstrating the ability of the drainage way(s) to handle stormwater runoff.*
- (m) Additional requirements for the Stormwater Management Plan can be found in the County Stormwater Design Manual.

In cases in which a structural stormwater management improvement is proposed for a development to meet the requirements of this Ordinance, a currently licensed professional authorized under North Carolina law shall sign and seal a certification on the Plan *according to Section 19*.

Section 12. Stormwater Facilities Inspection and Maintenance Program

In order to abate and prevent nuisances resulting from improperly maintained stormwater *management* improvements, it shall be the duty of the Owner(s) to obtain an approval of a Stormwater Management Facility Maintenance Program (“Program”) prior to issuance of the *Stormwater Approval*. The approved Program will be recorded with the Union County Register of Deeds.

- (a) Prior to initiating construction on any stormwater management facility or structure, a Program shall be submitted by the Owner for approval from the Stormwater Administrator. The proposed Program shall include at a minimum:
 - i. *The person(s) or organization(s) responsible for maintenance and inspections of the stormwater management facilities.*
 - ii. A description and a schedule of the maintenance activities *and periodic inspections* necessary to keep the *stormwater management* facilities of the Plan in proper working *condition to meet design standards and any other provisions established by this ordinance*. *All stormwater management facilities must undergo, at the minimum, an annual inspection to document maintenance and repair needs and ensure*

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compliance with the requirements of this ordinance. Inspections may include, but are not limited to: reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in stormwater management facilities; and evaluating the condition of stormwater management facilities and other stormwater treatment practices.

- iii. A cost analysis of the necessary maintenance activities *and inspections* for 20 years after construction of *the stormwater management facilities*.
 - iv. A map of the development showing the stormwater management facilities, the areas of impounded water, and easements.
 - v. Signed agreement form provided by the County granting access to the County for annual inspection and potential maintenance activities *of the stormwater management facilities*.
 - vi. An acknowledgement and agreement that:
 - 1) The County has the right and authority to inspect stormwater management improvements and to notify the Owner when maintenance or repairs are required;
 - 2) All required maintenance and repairs *of the stormwater management facilities* will be initiated within fifteen (15) days and completed within sixty (60) days of such notice; and
 - 3) In the case of failure by the Owner to perform the required maintenance or repairs within the stated period, the County may perform such required maintenance or repairs and recover all attendant costs from the Owner.
- (b) The Program shall bind the Owner and all subsequent owners, successors, and assignees to the requirements of the above-mentioned Program.
- (c) *Parties responsible for the inspection, operation, and maintenance of any stormwater management facility shall submit to the Stormwater Administrator an inspection report from a registered professional. The inspection report shall contain all of the following:*
- i. *The name and address of the land owner;*
 - ii. *The recorded book and page number of each stormwater management facility Program;*
 - iii. *A statement that an inspection was made of all stormwater management facilities;*
 - iv. *The date the inspection was made;*
 - v. *Documented maintenance and repair needs performed;*

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- vi. *A statement that all inspected stormwater management facilities are performing properly and are in compliance with the terms and conditions of the approved maintenance agreement required by this ordinance; ~~and~~ or, in cases of deficiencies, the steps being taken to correct such deficiencies; and*
- vii. *The signature and seal of the registered professional.*

An original inspection report shall be provided to the Stormwater Administrator beginning one year from the date of as-built certification and each year thereafter on or before the date of the as-built certification. Records shall be retained for a period of at least five years.

Section 13. Final Plat Requirements Related to Stormwater

- (a) *All streams, ponds, wetlands, buffer boundaries including the delineation of each buffer zone, and the base flood level boundary must be specified on all surveys and final plats. All lots containing floodplains must show finished floor elevations.*
- (b) *The exact boundary of all stormwater management facilities shall be shown and labeled on final plats prepared by a registered surveyor. Also, these plats shall contain the following statement: “This lot contains a water quality feature that must be maintained in accordance with the recorded Maintenance Agreement as specified in Section 16 of the Union County Stormwater Discharge and Quality Control Ordinance.”*

Section 14. As-Built Plans

Upon completion of new construction, the Owner is required to provide “as-built” plans prior to receiving an occupancy permit for the property. The plan must show the final design specifications for all stormwater management facilities and must be certified by a registered professional.

Section 15. Certification

Certification to be provided with engineering or stormwater control plans is provided below and should be stamped or sealed, signed and dated with the submittal.

“I certify that this plan complies with the ordinance, Rules, regulations, and stormwater drainage design Standards of Union County.”

Certification must also be provided by a NC registered professional for the “as-built” plans. The certification to be made is provided below and should be stamped or sealed, signed and dated with the submittal.

“I certify that the stormwater management facilities are constructed and installed in conformance with

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the ordinances, rules, regulations, drainage design standards of Union County and the approved Stormwater Management plan.”

Section 16. Letter of Credit

The performance security for the stormwater management facilities, as set forth in the Union County Land Use Ordinance, shall be released in full only upon submission of “as built plans” and written certification by a registered professional that the stormwater practice has been installed in accordance with the approved plan and other applicable provisions of this ordinance.

ARTICLE 4. INSPECTION AND MONITORING

Section 17. Right of Entry and Access

The County shall have right of entry on or upon the property of any Owner subject to this Ordinance and properties for which any permit/document is issued hereunder. The County shall be provided ready access to all parts of the premises for the purposes of inspection, monitoring, sampling, inventory, records examination and copying, and the performance of any other duties necessary to determine compliance with this Ordinance. *The County shall have the right to set up on the Owner’s property such devices, as are necessary to conduct monitoring and/or sampling of the Owner’s operations.*

The Owner at the written or verbal request of the County shall remove any temporary or permanent obstruction to allow safe and easy access to the areas to be inspected and/or monitored promptly. The costs of clearing such access shall be borne by the Owner.

In cases in which an Owner has security measures in force which require identification and clearance of personnel before entry into their premises, that Owner shall make necessary arrangements with their security guards so that, upon presentation of suitable identification, the County will be permitted to enter for the purpose of performing stormwater management responsibilities without delay.

If the Owner or occupant of any property refuses to permit such entry and access, the County may seek issuance of an administrative search warrant. No person shall obstruct, hamper or interfere with the Stormwater Administrator while carrying out his or her official duties.

ARTICLE 7. FEES, SERVICE CHARGES AND RATES

Section 18. Plan Review Fees

There will be a separate administrative fee assessed to an applicant for the review and approval of each Stormwater Management Plan and Inspection and Maintenance Program. These fees shall be in accordance with a schedule of fees established by the County, which may be adjusted from time to time.

At the sole judgment of the County, this fee shall be assessed each time a Plan or Program is returned for re-review after revisions have been made.

An initial plan review fee of \$500 shall be assessed. One re-submittal of revised plans or calculations may be submitted without payment of an additional review fee. If additional reviews are required after the allotted amount, \$250 re-review fee shall be assessed per each re-submittal.