***PROPOSED AMENDMENT***

Amend Article 3, Section 18-52 Penalties and Remedies.

**Sec. 18-52. Penalties and Remedies.**

***

(e) Violation of Article 14, Division III of this code may subject the violator to a civil penalty up to the full amount of penalty to which the city is subject for violations of its Phase II Stormwater permit.

Amend Article 14, Division III. Stormwater management by striking the existing Division III in its entirety and replacing it with the following.

DIVISION III. STORMWATER MANAGEMENT

PART 1. GENERAL PROVISIONS

*Sec. 18-731. Title*
*Sec. 18-732. Authority*
*Sec. 18-733. Findings*
*Sec. 18-734. Purpose*
*Sec. 18-735. Applicability and jurisdiction*
*Sec. 18-736. Interpretation*
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PART 2. ADMINISTRATION AND PROCEDURES

*Sec. 18-746. Administration*
*Sec. 18-747. Review procedures*
*Sec. 18-748. Concept plan*
*Sec. 18-749. Off-site stormwater management requirement*
*Sec. 18-750. Stormwater management measures in the CBD and RFMU districts*
*Sec. 18-751. Additional requirements for fee alternative*
*Sec. 18-752. As-built plans and final approval*
*Sec. 18-753. Other permits*
*Sec. 18-754. Approvals*

PART 3. STANDARDS

*Sec. 18-760. General standards*
*Sec. 18-761. Other considerations in design preparation*
*Sec. 18-762. Development standards near Outstanding Resource Waters*
*Sec. 18-763. Development standards near Class SA waters*
*Sec. 18-764. Development standards for all other areas*
*Sec. 18-765. Standards for stormwater control measures*
*Sec. 18-766. Certain wetlands excluded from density calculations*
*Sec. 18-767. Additional standards for special situations*

PART 4. MAINTENANCE

PART 1. GENERAL PROVISIONS

**Sec. 18-731. Title**

This division of article 14 of the Land Development Code shall be known as the "Comprehensive Stormwater Ordinance." It is referred to herein as "this ordinance."

**Sec. 18-732. Authority**

The city is authorized to adopt this ordinance pursuant to North Carolina law, including but not limited to: Article 14, Section 5 of the Constitution of North Carolina; Article XXIII of the Wilmington City Charter ; North Carolina General Statute §§ 143-214.7, 160A-174, 160A-175, 160A-185; North Carolina General Statute §160A, Article 19; and North Carolina Session Law 2004-163.

**Sec. 18-733. Findings**

It is hereby determined that:

Increasing impervious surfaces alters the hydrologic response of local watersheds and increases stormwater runoff rates and volumes, flooding, soil erosion, stream channel erosion, nonpoint and point source pollution, and sediment transport and deposition, as well as reducing groundwater recharge;

These changes in stormwater runoff contribute to increased quantities of water-borne pollutants and alterations in hydrology that are harmful to public health and safety as well as to the natural environment; and

These effects can be managed and minimized by applying proper design and well-planned controls to manage stormwater runoff from development sites.

Further, the Federal Water Pollution Control Act of 1972 ("Clean Water Act") and federal Phase II Stormwater Rules promulgated under it, as well as rules of the North Carolina Environmental Management Commission promulgated in response to federal Phase II requirements, compel certain urbanized areas, including this jurisdiction, to adopt minimum stormwater controls such as those included in this ordinance.

Therefore, the city establishes this set of water quality and quantity regulations to meet the requirements of state and federal law regarding control of stormwater runoff and discharge.

**Sec. 18-734. Purpose**

(a) *General*. The purpose of this ordinance is to protect, maintain and enhance the public health, safety, environment and general welfare by establishing minimum requirements and procedures to control the adverse effects of increased post-development stormwater runoff and nonpoint and point source pollution associated with new development and redevelopment. It has been determined that proper management of construction-related and post-development

stormwater runoff will minimize damage to public and private property and infrastructure; safeguard the public health, safety, and general welfare; and protect water and aquatic resources.

(b) *Specific*. This ordinance seeks to meet its general purpose through the following specific objectives and means:

(1) Establish decision-making processes for development that protect the integrity of watersheds and preserve the health of water resources;

(2) Require that new development, redevelopment, and expansion maintain the pre-development hydrologic response in their post-development state as nearly as practicable for the 2-year, 10-year, and 25-year design storms to reduce flooding, stream bank erosion, nonpoint and point source pollution and increases in stream temperature, and to maintain the integrity of stream channels and aquatic habitats;

(3) Establish minimum post-development stormwater management standards and design criteria for the regulation and control of stormwater runoff quantity and quality;

(4) Establish design and review criteria for the construction, function, and use of structural stormwater BMPs that may be used to meet the minimum post-development stormwater management standards;

(5) Encourage the use of better management and site design practices, such as the use of vegetated conveyances for stormwater and the preservation of green space, riparian buffers and other conservation areas to the maximum extent practicable;

(6) Establish provisions for the long-term responsibility for and maintenance of structural and nonstructural stormwater BMPs to ensure that they continue to function as designed, are maintained appropriately, and pose no threat to public safety;

(7) Establish administrative procedures for the submission, review, approval, and disapproval of stormwater management plans, for the inspection of approved projects, and to assure appropriate long-term maintenance;

(8) Coordinate site design plans that include open space and natural areas with the intent and policies of the Future Land Use Plan, and the Wilmington-New Hanover County CAMA Plan.

**Sec. 18-735. Applicability and jurisdiction**

(a) *General*. Beginning with and subsequent to its effective date, this ordinance shall be applicable to all development, redevelopment, and expansion including, but not limited to, site plan applications, subdivision applications, and grading applications, unless exempt pursuant to this section.

(b) *Applicability.*

(1) Except as otherwise provided herein, the provisions of this division shall apply to each of the following:

a. Any non-residential development activity that creates a total of ten thousand (10,000) square feet or more of newly constructed impervious surface area irrespective of the condition of the existing surface upon which the impervious surface area is created.

b. All new major subdivisions as defined in Article 7 of this chapter.

c. Any development activity that requires a Sedimentation and Erosion Control Plan.

d. Any development activity that requires a Coastal Area Management Act (CAMA) Major Development Permit.

e. Any single family residential development within one-half mile and draining to Class SA waters, that has an ~~built upon area~~impervious surface area greater than 12 percent (12%), and that will add 10,000 square feet or more of impervious surface.

(2) A development activity or project requires a Sedimentation and Erosion Control Plan if the activity or project disturbs one acre or more of land, including an activity or project that disturbs less than one acre of land that is part of a larger common plan of development.

"Common plan of development" is interpreted as an area where construction activities may be taking place at different times, but under a single over-arching development plan. For example, a residential development project that involves subdivision of land, installation of utilities, access roads and other common facilities with the intention of selling or developing lots in the subdivision as home sites. A stormwater permit is required to cover all activities under the common plan of development including future home sites such that the stormwater system is capable of managing runoff from the entire project at complete build out.

(2) In applying the provisions of this Article, the cumulative area of the proposed development activity and all development activity on a site within the two (2) year period immediately preceding the date of application for a stormwater discharge permit shall be considered together.

(3) Whenever an existing developed site is modified to create a total of ten thousand (10,000) square feet or more of newly constructed impervious surface area,

irrespective of the condition of the existing surface upon which the new impervious surface is created, the modified portion of the site shall comply with this Article. Whenever the modification results in placement of newly constructed impervious surface over any existing surface such that the newly constructed impervious area equals or exceeds fifty (50) percent of the total impervious surface area, then the entire site shall be required to comply with this article. In determining the applicability of this section, resurfacing of existing pavement without demolition is considered maintenance and not placement of new impervious surface.

(4) Any area to be paved, stabilized or otherwise made impervious to storm water exceeding two thousand five hundred (2,500) square feet shall require an approved drainage plan in accordance with the city Technical Standards. Site drainage shall be conveyed through vegetated swales or underground pipes of sufficient size to the nearest storm drain or otherwise as provided in the city's *Technical Standards and Design Specifications Manual*.

(c) *Exemptions*. The following shall be exempt from the requirements of this division.

(1) The installation, repair, replacement or maintenance of subsurface utilities by public or private utility operators;

(2) Single-family residential unit that does not meet the applicability standards above;

(3) Single-structure duplex residential building (one building with two units not part of a larger common plan or subdivision) unless it meets the threshold for applicability set forth in this section; and

(4) Any area to be paved, stabilized, or otherwise made impervious to stormwater that does not exceed two thousand five hundred (2,500) square feet.

(d) *Compliance and permit*. No land disturbing activity shall occur except in compliance with the provisions of this ordinance or unless exempted. No development for which a permit is required pursuant to this ordinance shall occur except in compliance with the provisions, conditions, and limitations of the permit.

(e) *Area of applicability*. The provisions of this ordinance shall apply within the corporate limits of the city. The official map of the corporate limits being that along with any written description maintained in the office of the City Clerk as required by G.S. 160A-22.

**Sec. 18-736. Interpretation**

In the event of a dispute, the applicability of this ordinance to a particular area of land or BMP shall be determined by reference to the North Carolina General Statutes, the North Carolina Administrative Code, and local zoning and jurisdictional boundary ordinances.

**Sec. 18-737. Design manual**

(a) *Reference*. The City Manager shall use the policy, criteria, and information, including technical specifications and standards, in the *Wilmington Technical Standards and Specifications Manual* as the basis for decisions about stormwater permits. The *New Hanover County – Wilmington Low Impact Development (LID) Guidance Manual* and the *State of North Carolina Manual of Stormwater Best Management Practices* may be used as the basis for design, implementation, performance, and maintenance of *structural and non-structural stormwater BMPs*. When there is a conflict between these manuals, the more stringent standards shall apply.

These manuals include acceptable stormwater treatment practices, including specific design criteria for each stormwater practice. Stormwater treatment practices that are designed, constructed, and maintained in accordance with these design and sizing criteria will be presumed to meet the minimum water quality performance standards of the Phase II laws and regulations.

(b) *Relationship of design manuals to other laws and regulations*. If the specifications or guidelines of the design manuals are more restrictive or apply a higher standard than other laws or regulations, that fact shall not prevent application of the specifications or guidelines in the design manuals.

(c) *Changes to standards and specifications*. If the standards, specifications, guidelines, policies, criteria, or other information in the design manuals are amended subsequent to the submittal of an application for approval pursuant to this ordinance but prior to approval, the design manual in effect at the time of submittal shall control and shall be utilized in reviewing the application and in implementing this ordinance with regard to the application, unless the applicant specifically requests review and permitting under the new policies, provided, however, the applicant submits all documentation required for approval within eighteen (18) months of the date of site plan acceptance in accordance with Article 3 of this Chapter. A combination of policies (old and new) shall be prohibited.

(d) *Amendments to design manual*. The design manuals may be updated and expanded from time to time, based on advancements in technology and engineering, improved knowledge of local conditions, or local monitoring or maintenance experience.

Prior to amending or updating the design manuals, proposed changes shall be generally publicized and made available for review, and an opportunity for comment by interested persons shall be provided, except where annual updates are scheduled or changes are deemed by the City Manager to be insignificant.

**Sec. 18-738-- Sec. 18-745. Reserved.**

PART 2. ADMINISTRATION AND PROCEDURES

**Sec. 18-746. Administration**

(a) *Powers and duties*. In addition to the powers and duties that may be conferred by other provisions of the Land Development Code and other laws, the City Manager shall have the following powers and duties under this ordinance:

(1) To review and approve, approve with conditions, or disapprove applications for approval of plans pursuant to this ordinance.

(2) To make determinations and render interpretations of this ordinance.

(3) To establish application requirements and schedules for submittal and review of applications and appeals, to review and make recommendations to the city on applications for development or redevelopment approvals.

(4) To enforce the provisions of this ordinance.

(5) To maintain records, maps, forms and other official materials as related to the adoption, amendment, enforcement, and administration of this ordinance.

(6) To provide expertise and technical assistance to the City Council, upon request.

(7) To designate appropriate other person(s) who shall carry out the powers and duties of the City Manager.

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

**Sec. 18-747. Review Procedures**

(a) *Stormwater discharge permit required*. A stormwater permit is required for all development, redevelopment, and expansion unless exempt pursuant to this Article. A permit may only be issued subsequent to a properly submitted and reviewed permit application, pursuant to this section. For phased developments, each phase shall require a separate, standalone stormwater permit application.

No owner or developer of a site shall commence any of the development activities described in this division above without obtaining a stormwater management permit pursuant to the provisions of this ordinance unless explicitly exempted.

(1) Issuance.

No stormwater management permit shall be issued until the following conditions are met:

a. Approval of a stormwater management plan by the City Manager.

b. Submission and approval of any required easements and stormwater management inspection and maintenance agreements or other documents as required by this ordinance. All documents required by this ordinance shall be fully executed prior to the recordation of the final subdivision plat or issuance of the certificate of occupancy.

c. Payment of stormwater management contribution where off-site stormwater management is applicable.

d. Payment of all required application fees.

e. Compliance with all applicable laws, ordinances, and regulations.

(2) Transferability.

Stormwater management permits shall be issued in the name of the applicant(s) and no permit shall be transferred or assigned without the written consent of the City Manager.

(b) *Existing Permit Modifications*. An existing development proposing to make modifications to an existing permit may be subject to permit revision by NC DWQ or the City according to the following scenarios.

(1) For an existing subdivision that has an existing NCDWQ permit with some of the lots not yet developed the developer of an undeveloped lot would continue to be subject to permitting through NC DWQ.

(2) For existing developed parcels with existing NCDWQ permit that are redeveloped the following permitting requirements apply:

a. Minor modifications which could mean a change to BUA but no change to the BMP(s) would be processed by NCDWQ

b. Major modifications which means there is a required change to the BMP(s) would be permitted by the City. NCDWQ will rescind their permit after the new City permit is issued.

(3) Permit renewals will be coordinated by the originating permitting agency.

(~~b~~c) *Effect of permit*. A stormwater management permit shall govern the design, installation, and construction of stormwater management and control practices on the site, including structural BMPs and elements of site design for stormwater management other than structural BMPs.

The permit is intended to provide a mechanism for the review, approval, and inspection of the approach to be used for the management and control of stormwater for the development or redevelopment of a site consistent with the requirements of this ordinance, whether the approach consists of structural BMPs or other techniques such as low-impact or low-density design. The permit does not continue in existence indefinitely after the completion of the project; rather, compliance after project construction is assured by the maintenance provisions of this ordinance.

(~~c~~d) *Authority to file applications*. All applications required pursuant to this Code shall be submitted to the city by the land owner or the land owner's duly authorized agent. A separate application shall be required for each permit, but a permit and application therefore may cover any number of lots being developed as a single project. The application shall be filed with the city on a form approved by the City Manager, and signed by the applicant, or by the applicant's agent or representative.

(~~d~~e) *Submittal of complete application*. An application shall be considered as timely submitted and complete only when it contains all elements of a complete application pursuant to the application submittal schedule and this ordinance, along with the appropriate review fee as set forth in the fee schedule. If the reviewer finds that an application is incomplete, the applicant shall be notified of the deficient elements within fifteen (15) working days from the day of submittal and shall be provided with an opportunity to submit a complete application. If the deficiencies are not corrected by the applicant within fifteen (15) working days from the time of notice of the deficiencies, the application shall be considered withdrawn. However, the submittal of an incomplete application shall not suffice to meet a deadline contained in any submission schedule established for the review of applications. To be complete, an application shall include the appropriate fee as set forth in the fee schedule.

A complete application shall not be construed as an approved application nor shall it indicate that additional information will not be required for submission as part of the review process.

(~~e~~f) *Review*. The City Manager shall review the application and determine whether the application complies with the standards of this ordinance.

(1) Approval.

The City Manager shall approve the application if the application complies with the standards of this ordinance. The City Manager may impose conditions of approval as needed to ensure compliance with this ordinance. The conditions shall be included as part of the approval.

(2) Conditions of approval.

All stormwater management permits are conditioned on compliance with the approved plan and with all relevant laws, ordinances, regulations, and standards of any state or local government or agency, including any standards established by the city relating to stormwater management. Permits are also conditioned on

the agreement and obligation of the applicant to save harmless the city, its officers and employees, from any expense incurred through the failure of the applicant, or the applicant's agents to complete any required stormwater management measures, or from any damages growing out of the negligence of the applicant or the applicant's agents in connection with stormwater management measures.

(3) Failure to comply.

The City Manager shall notify the applicant if the application fails to comply with the standards of this ordinance, and shall indicate how the application fails to comply. The applicant shall have an opportunity to submit an application with revisions. (This shall be known as a re-submittal)

(4) Re-submittal

A complete revised application shall be reviewed by the City Manager after its re-submittal and shall be approved, approved with conditions, or disapproved. One re-submittal of an application may be submitted without payment of an additional permit review fee.

**Sec. 18-748. Concept plan.**

Before a stormwater management permit application is submitted, the developer shall submit a concept plan for the post-construction stormwater management system to be utilized. This concept plan shall be reviewed at the TRC review stage if applicable. For projects not requiring TRC review, the applicant may schedule a pre-application conference. The purpose of this review is to discuss the post-construction stormwater management measures necessary for the proposed project, as well as to discuss and assess constraints, opportunities and potential approaches to stormwater management designs before formal site design engineering is commenced. Any relevant local watershed plans, the Future Land Use Plan, the CAMA Plan, and other relevant resource protection plans should be consulted in the discussion of the concept plan.

To accomplish this goal, the following minimum information shall be included in the concept plan, which shall also be submitted as part of the application:

(a) Existing conditions and proposed site plan.

Existing conditions and proposed site layout sketch plans, which illustrate at a minimum: existing and proposed topography; existence of any streams or other surface waters; mapping of predominant soils from soil surveys; boundaries of existing predominant vegetation; proposed limits of clearing and grading; and location of existing and proposed roads, buildings, parking areas and other impervious surfaces.

(b) Natural resources inventory.

The applicant shall submit a written or graphic inventory of natural resources at the site and surrounding area as it exists prior to the commencement of the project drawing on site data and available GIS information. This description should include a discussion of soil types, forest cover, significant geologic features, topography, wetlands, and native vegetative areas on the site, as well as the location and boundaries of other natural feature protection and conservation areas such as lakes, ponds, floodplains, stream buffers and other setbacks (e.g., drinking water well setbacks, septic setbacks, etc.). Particular attention should be paid to environmentally sensitive features that provide particular opportunities or constraints for development and stormwater management.

(c) Stormwater management system concept plan.

A written or graphic concept plan of the proposed post-development stormwater management system including: preliminary selection and location of proposed structural stormwater controls; low-impact design elements; preliminary sizing, location of existing and proposed conveyance systems such as grass channels, swales, and storm drains; flow paths; location of floodplain/floodway limits; relationship of site to upstream and downstream properties and drainages; and preliminary location of any proposed stream channel modifications, such as bridge or culvert crossings.

**Sec. 18-749. Off-site stormwater management requirement.**

Where property is undergoing redevelopment and on-site construction of a stormwater management facility is not feasible, as determined by the City Engineer, or where a public stormwater management facility or other improvements to the city's drainage system have been constructed, programmed, or identified for construction in the city's capital improvement program or are reflected on the city's master drainage improvement plan, which have or will have sufficient capacity to accommodate flood attenuation requirements for run-off generated by the development, the city may require the applicant to pay to the city a fee in lieu of construction of on-site stormwater management facilities in accordance with the following formula except in the CBD or RFMU districts where fee in lieu does not apply:

Fee = [(0.12) (Land value) + (Construction cost) (Site Acreage)] (% impervious)

For the purposes of this section, the following definitions apply:

(a) Land value shall be the fair market value for the tract of land being developed as determined by the City Attorney's office.

(b) Construction cost shall mean the dollar amount per acre of constructing on-site stormwater management facilities based on historical data. On the date of this ordinance, such

amount shall be five thousand forty-seven dollars ($5,047). Such amount shall be adjusted annually on July 1, based on the construction cost index for the prior year.

(c) Site acreage shall be the total area of the tract of land being developed and requiring stormwater management facilities in acres, rounded to the nearest tenth of an acre.

(d) Percent impervious shall be the acreage on the site requiring stormwater management facilities that is impenetrable by to water divided by the total site acreage, rounded to the nearest tenth of an acre. **Sec. 18-750. Stormwater management measures in the CBD and RFMU districts**

In the CBD and RFMU districts, stormwater management plans must include on-site measures that meet the performance standards of this section.

(a) The following water quality performance standards must be met with use of approved best management practices (BMPs).

(1) The project shall control and treat the run-off from the first one-and-one-half (1 ½) inches of rain, or.

(2) The project shall control and treat the difference in stormwater run-off between the pre-development and post-development conditions for the one (1) year, twenty-four (24) hour storm.

(3) The following is a list of BMPs deemed approved if designed and constructed according to the Technical Standards and Specifications Manual, the NC DENR BMP manual or the New Hanover County – Wilmington LID Guidance Manual, whichever is more stringent:

a. Vegetative roof cover

b. Permeable pavement

c. Infiltration devices

d. Bioretention devices

e. Other devices in the *City Technical Standards and Specifications Manual*, *NC BMP Manual*, and *New Hanover County – Wilmington LID Guidance Manual*

(4) The following BMPs may be considered on a case-by-case basis as approved by the City Manager:

a. Proprietary devices with design flow rates that have been approved for use by the City Engineer on a case-by-case basis to meet water quality standards; and

b. Cisterns with demonstrated capacity and use-assurance to meet requirements.

(b) *Redevelopment projects exempt*. Redevelopment projects in the CBD and RFMU districts that meet all of the following criteria are exempt from the provisions of this section:

(1) The redevelopment creates no net increase in total site ~~built upon area~~impervious surface area over existing site conditions;

(2) The proposed redevelopment provides stormwater controls that are equal or better than the previous development; and

(3) A site plan application for the redevelopment project has been accepted as complete within 180 days of completion of demolition of existing structures on the site. A site that is cleared and vacant for more than 180 days prior to completion of a redevelopment site plan will be considered for new development.

(c) *Other considerations*. This section does not apply to projects for which a stormwater permit has been issued prior to the adoption of this ordinance (September 1, 2008). No waivers shall be made retroactive to the effective date of this section. No refunds shall be considered for fees assessed prior to the effective date of this section.

**Sec. 18-751. Additional requirements for fee alternative.**

Fees approved and accepted by the city for off-site stormwater management shall be used by the city for land acquisition (including easements and rights-of-way) and the study, engineering, design, purchase, construction, expansion, repair, maintenance, landscaping, and inspection of public stormwater management facilities, either existing or contained in an approved capital improvements program or reflected on the city's master drainage improvement plan. Fees collected from the development shall be applied to projects benefiting in the drainage basin from which the fee is collected.

**Sec. 18-752. As-built plans and final approval**

Upon completion of a project, and before a certificate of occupancy shall be granted, the applicant shall certify that the completed project is in accordance with the approved stormwater management plans and designs, and shall submit actual “as-built” plans for all stormwater management facilities or practices after final construction is completed.

The plans shall show the final design specifications for all stormwater management facilities and practices and the field location, type, size, depth, invert and planted vegetation of all measures, controls, and devices, as installed. As-built plans shall be prepared in accordance with the city Technical Standards. As-built stormwater measures, controls, and devices shall be

certified, under seal, to be in compliance with the approved stormwater management plans and designs and with the requirements of this ordinance. A final inspection and approval by the City Manager shall occur before the release of any performance securities.

**Sec. 18-753. Other Permits**

No certificate of compliance or occupancy shall be issued by the city without final as-built plans and a final inspection and approval by the City Manager, except where multiple units are served by the stormwater practice or facilities, in which case the city may elect to withhold a percentage of permits or certificates of occupancy until as-built plans are submitted and final inspection and approval has occurred.

**Sec. 18-754. Approvals**

(a) *Effect of approval*. Approval authorizes the applicant to go forward with only the specific plans and activities authorized in the permit. The approval shall not be construed to exempt the applicant from obtaining other applicable approvals from local, state, and federal authorities.

(b) *Time limit/expiration*. An approved plan shall become invalid if the applicant fails to make substantial progress on the site within 18 months after the date of approval. The City Manager may grant a single, 6 month extension of this time limit, for good cause shown, upon receiving a written request from the applicant before the expiration of the approved plan.

In granting an extension, the City Manager may require compliance with standards adopted since the original application was submitted unless there has been substantial reliance on the original permit and the change in standards would infringe the applicant's vested rights.

(c) *Renewal*. If the stormwater management permit expires, the permittee shall make application for a new permit in accordance with this ordinance.

**Sec. 18-755--18-759. Reserved.**

PART 3. STANDARDS

**Sec. 18-760. General Standards.**

All development, redevelopment, or expansion to which this ordinance applies shall comply with the standards of this section.

(a) Design Storm. The city has determined regardless of density classification or location the minimum control for safety of life and property to be the control of the post-development peak discharge rate of the 2-year, 10-year, and 25-year storms to not exceed the pre-development peak runoff discharge rate for the same storms.

(b) Overland Flow. Design engineers shall indicate on the project drainage plans, the location and approximate extent of the overland relief path and areas that may be affected by surface storage for the appropriate design storm

(c) For redevelopment projects that meet the criteria laid out in 18-750(b) and located in priority redevelopment areas as identified in the Future Land Use Plan or approved corridor plans, the project shall be required to provide equal or better stormwater management to control peak runoff volumes and at a minimum shall treat the water quality volume specified in this section.

(d) Buffers from surface waters. New development shall have a 50-foot-wide vegetative buffer and redevelopment activities shall have a 30-foot-wide vegetative buffer along all perennial or intermittent surface waters. A perennial or intermittent surface water shall be deemed present if the feature is approximately shown on either the most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture (USDA) or the most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geologic Survey (USGS). The width of a buffer is measured horizontally from the normal pool elevation of impounded structures, from the bank of each side of streams or rivers, and from the mean high waterline of tidal waters, perpendicular to the shoreline. The vegetative buffer may be cleared or graded, but must be planted with and maintained in grass or any other vegetative or plant material and may contain vegetated BMPs that otherwise meet the requirements of this article and the design manual. Vegetative buffers and filters required by this section and any other buffers or filters required by State water quality or coastal management rules or local government requirements may be met concurrently and may contain, in whole or in part, coastal, isolated, or 404 jurisdictional wetlands that are located landward of the normal waterline.

(e) Built-upon area setbacks. All built-upon area shall be landward of any buffer required under this section from any perennial and intermittent surface waters as defined herein.

~~(a)~~(f) Relief from the buffer and setbacks required in this section may be granted when the applicant can provide an official letter of determination by the NC Division of Water Quality that surface waters are not present in accordance with 15A NCAC 02B .0233(3)(a).

~~(b)~~(g) The development or redevelopment of a parcel in the Urban Waterfront as defined by NC Administrative Code 15 NCAC 07H .0209(g) is exempt from the buffer and setback requirements of this section provided that it meets the following conditions:

(1) To the extent practical, the project meets the baseline criteria of Article 10 for exceptionally designed projects;

(2) The project includes an extension of or connection to the riverwalk consistent with city plans and design standards and meets ADA design standards along with a public access easement approved by the City Attorney;

(3) The project includes public access traversing the project connecting to the riverwalk with easements approved by the City Attorney spaced at intervals of approximately two hundred (200) feet, or intervals dictated by established or approved street patterns. These pedestrian ways must be landscaped and integrated with public spaces along the river front; and

(4) The project contains a minimum of ten (10) percent pedestrian-oriented, public space connected and integrated with the riverwalk. Public spaces shall provide amenities for comfort and convenience for pedestrians such as seating, lighting, directional signage, bicycle racks, and trash receptacles.

~~(c)~~(h) Restrictions on use of property. The approval of the stormwater management permit shall require an enforceable restriction on property usage that runs with the land, such as a recorded deed restriction or protective covenants, to ensure that future development, management, redevelopment, or expansion maintains the site consistent with the approved project plans, including recordation on any approved plat limits of impervious surface area on a per-lot basis, if applicable.

~~(d)~~(i) Required action by homeowners' associations.

(1) For multiple lot developments, a homeowners or property owners association ("HOA") shall regulate through deed restrictions the allocation of impervious surface area on a per-lot budget as identified on approved plans and recorded plats and shall submit to the City Manager annually on July 1st a report demonstrating compliance with deed restrictions and with impervious surface limits. Failure to submit such report shall be a violation of the Land Development Code.

(2) Upon finding that the impervious surface budget has been exceeded for a multiple lot development as a whole, the HOA shall take appropriate steps subject to city approval to bring the project into compliance with the permit.

(3) Failure to submit a report or the failure to take appropriate actions to bring the development into compliance shall be a violation of this division.

**Sec. 18-761. Other considerations in design preparation.**

(a) The pre-development peak discharge rate shall be computed assuming that all land uses in the drainage area of the proposed facility are in a predevelopment state. The city considers predevelopment state to be woods in good condition for the purposes of determining run-off coefficients.

(b) Where storm drainage systems convey off-site stormwater through the property, computations reflecting the drainage area of land tributary to the site, and estimated runoff of the area served by such systems, shall be provided. In addition, a complete 25-year event storm drainage study shall be submitted for the site. All storm drainage systems conveying off-site stormwater through property shall be public systems or private systems which shall be designed, constructed and maintained to at least the standards of a public storm drainage system as contained in the standards and specifications manual. The design and construction shall be certified by an authorized registered professional as meeting or exceeding the requirements of this division and the stormwater management technical standards and specifications.

**Sec. 18-762. Development standards near Outstanding Resource Waters**

Development activities within 575 feet of the mean high waterline of areas designated by the Environmental Management Commission ("Commission") as Outstanding Resource Waters (ORW) shall be permitted as follows:

(a) *Low-density projects*. Development shall comply with all of the following standards in addition to the general standards in Section 18-760 in order to be considered low-density:

(1) The development has a ~~built upon area~~impervious surface area of twelve percent (12%) or less. A development project with an overall density at or below the low-density threshold, but containing areas with a density greater than the overall project density, shall be considered low-density as long as the project meets or exceeds the requirements for low-density development and locates the higher density development in upland areas and away from surface waters and drainage ways to the maximum extent practicable taking existing site constraints into consideration.

(2) Stormwater runoff from the development is transported primarily by vegetated conveyances. As used in this section, "conveyance system" shall not include a stormwater collection system. Stormwater runoff from ~~built upon area~~impervious surface areas that is directed to flow through any wetlands shall flow into and through these wetlands at a non-erosive velocity.

(b) *High-density projects*. Development shall comply with all of the following standards in addition to the general standards in Section 18-760 in order to be considered high-density:

(1) The development has a ~~built upon area~~impervious surface area of greater than twelve percent (12%).

(2) The development has no direct outlet channels or pipes to Class SA waters unless permitted in accordance with the design manual. Stormwater runoff from ~~built upon area~~impervious surface areas that is directed to flow through any wetlands shall flow into and through these wetlands at a non-erosive velocity.

(3) The "water quality volume" for design of the stormwater system is the stormwater runoff from all surfaces generated by one and one half inches of rainfall or the difference in the stormwater runoff from all surfaces from the predevelopment and post development conditions for a one-year, 24-hour storm, whichever is greater. Runoff volume drawdown time shall be a minimum of 48 hours, but not more than 120 hours.

(4) The development utilizes control systems that are any combination of infiltration systems, bioretention systems, constructed stormwater wetlands, sand filters, rain barrels, cisterns, rain gardens or alternative low impact development stormwater management systems designed in accordance with the design manual to treat the water quality volume. Wet detention ponds may be used as a stormwater control system to meet the requirements of this section, provided that the stormwater control system fully complies with the requirements of this section. If a wet detention pond is used within one-half mile of Class SA waters, installation of a stormwater best management practice in series with the wet detention pond shall be required to treat the discharge from the wet detention pond. Secondary stormwater best management practices that are used in series with another stormwater best management practice do not require any minimum separation from the seasonal high water table.

(5) Stormwater runoff from the development that is in excess of the water quality volume must flow overland through a vegetative filter designed in accordance with design manual with a minimum length of 50 feet measured from mean high water of Class SA waters.

(6) All structural stormwater treatment systems used to meet these requirements shall be designed to have a minimum of 85% average annual removal for total suspended solids (TSS).

(7) General engineering design criteria for all projects shall be in accordance with 15A NCAC 2H .1008(c), as explained in the design manual.

(c) *Stormwater discharges prohibited*. All development activities, including both low- and high-density projects, shall prohibit new points of stormwater discharge to Class SA waters or an increase in the volume of stormwater flow through conveyances or increase in capacity of conveyances of existing stormwater conveyance systems that drain to Class SA waters. Any modification or redesign of a stormwater conveyance system within the contributing

drainage basin must not increase the net amount or rate of stormwater discharge through existing outfalls to Class SA waters. The following shall not be considered a direct point of stormwater discharge:

(1) Infiltration of the stormwater runoff of the water quality volume as described in this section.

(2) Diffuse flow of stormwater at a non-erosive velocity to a vegetated buffer or other natural area, that is capable of providing effective infiltration of the runoff of the water quality volume as described in this section. Notwithstanding the other requirements of this section, the infiltration mandated in this section does not require a minimum separation from the seasonal high-water table however all other requirements of this article must be met...

(3) The discharge from a wet detention pond that is treated by a secondary stormwater best management practice, provided that both the wet detention pond and the secondary stormwater best management practice meet the requirements of this section.

(d) *Limitation on the density of development*. Development shall be limited to a ~~built upon area~~impervious surface area of twenty-five percent (25%) or less.

**Sec. 18-763. Development standards near Class SA waters**

Development within one-half mile of waters classified by the Commission as Class SA waters and draining to unnamed freshwater tributaries to Class SA waters shall be permitted as follows:

(a) *Low-density projects*. Development shall comply with all of the following standards in addition to the general standards in Section 18-760 in order to be considered low-density:

(1) The development has an ~~built upon area~~impervious surface area of twelve percent (12%) or less. A development project with an overall density at or below the low-density threshold, but containing areas with a density greater than the overall project density, shall be considered low-density as long as the project meets or exceeds the requirements for low-density development and locates the higher density development in upland areas and away from surface waters and drainage ways to the maximum extent practicable taking existing site constraints into consideration.

(2) Stormwater runoff from the development is transported primarily by a vegetated conveyance system. As used in this section, "conveyance system" shall not include a stormwater collection system. Stormwater runoff from ~~built upon area~~impervious surface areas that is directed to flow through any wetlands shall flow into and through these wetlands at a non-erosive velocity.

(b) *High-density projects*. Development shall comply with all of the following standards in addition to the general standards in Section 18-760 in order to be considered high-density:

(1) The development has an ~~built upon area~~impervious surface area of greater than twelve percent (12%).

(2) The development has no direct outlet channels or pipes to Class SA waters unless permitted in accordance with the design manual. Stormwater runoff from ~~built upon area~~impervious surface areas that is directed to flow through any wetlands shall flow into and through these wetlands at a non-erosive velocity.

(3) The water quality volume for design of the stormwater system is the stormwater runoff from all surfaces generated by one and one half inches of rainfall or the difference in the stormwater runoff from all surfaces from the predevelopment and post development conditions for a one-year, 24-hour storm, whichever is greater. Runoff volume drawdown time shall be a minimum of 48 hours, but not more than 120 hours.

(4) The development utilizes control systems that are any combination of infiltration systems, bioretention systems, constructed stormwater wetlands, sand filters, rain barrels, cisterns, rain gardens or alternative low impact development stormwater management systems designed in accordance with the design manual to treat the runoff from all surfaces generated by one and one-half inches of rainfall. Wet detention ponds may be used as a stormwater control system to meet the requirements of this section, provided that the stormwater control system fully complies with the requirements of this section. If a wet detention pond is used within one-half mile of Class SA waters, installation of a stormwater best management practice in series with the wet detention pond shall be required to treat the discharge from the wet detention pond. Secondary stormwater best management practices that are used in series with another stormwater best management practice do not require any minimum separation from the seasonal high water table.

(5) Stormwater runoff from the development that is in excess of the design volume must flow overland through a vegetative filter designed in accordance with design manual with a minimum length of 50 feet measured from mean high water of Class SA waters.

(6) All structural stormwater treatment systems used to meet these requirements shall be designed to have a minimum of 85% average annual removal for total suspended solids (TSS).

(7) General engineering design criteria for all projects shall be in accordance with 15A NCAC 2H .1008(c), as explained in the design manual.

(c) *Stormwater discharges prohibited*. All development activities, including both low- and high-density projects, shall prohibit new points of stormwater discharge to Class SA waters or an increase in the volume of stormwater flow through conveyances or increase in capacity of conveyances of existing stormwater conveyance systems that drain to Class SA waters. Any modification or redesign of a stormwater conveyance system within the contributing drainage basin must not increase the net amount or rate of stormwater discharge through existing outfalls to Class SA waters. The following shall not be considered a direct point of stormwater discharge:

(1) Infiltration of the stormwater runoff from the water quality volume as described in this section.

(2) Diffuse flow of stormwater at a non-erosive velocity to a vegetated buffer or other natural area, that is capable of providing effective infiltration of the runoff from the water quality volume as described in this section. The infiltration mandated in this section does not require a minimum separation from the seasonal high-water table, however all other requirements of this division must be met.

(3) The discharge from a wet detention pond that is treated by a secondary stormwater best management practice, provided that both the wet detention pond and the secondary stormwater best management practice meet the requirements of this section.

(d) *BMPs for use in SA Watersheds.* BMPs that result in the highest degree of fecal coliform die-off and that meet the requirements for the density of the project shall be used. Structural and non-structural BMPs shall control sources of fecal coliform to the maximum extent practicable. The City Engineer shall maintain and annually update technical standards for BMPs that are determined as effective for removing fecal coliform.

**Sec. 18-764. Development standards for all other areas**

Development activities within the city except those areas near ORW and SA waters as described in previous sections of this division shall meet the following requirements:

(a) *Low-density projects*. Development shall comply with all of the following standards in addition to the general standards in Section 18-760 in order to be considered low-density:

(1) The development has an ~~built-upon area~~impervious surface area of twenty-four percent (24%) or less. A development project with an overall density at or below the low-density threshold, but containing areas with a density greater than the overall project density, shall be considered low density as long as the project meets or exceeds the requirements for low-density development and locates the higher density in upland areas and away from surface waters and drainage ways to the maximum extent practicable taking existing site constraints into consideration.

(2) Stormwater runoff from the development is transported primarily by vegetated conveyances systems. As used in this section, "conveyance system" shall not include a stormwater collection system. Stormwater runoff from ~~built upon area~~impervious surface areas that is directed to flow through any wetlands shall flow into and through these wetlands at a non-erosive velocity.

(b) *High-density projects*. Development shall comply with all of the following standards in addition to the general standards in Section 18-760 in order to be considered high-density:

(1) The development has an ~~built upon area~~impervious surface area of greater than twenty-four percent (24%).

(2) The development uses control systems that are any combination of infiltration systems, wet detention ponds, bioretention systems, constructed stormwater wetlands, sand filters, rain barrels, cisterns, or rain gardens.

(3) The water quality volume for design of the stormwater system is the stormwater runoff from all surfaces generated by one and one half inches of rainfall. Runoff volume drawdown time shall be a minimum of 48 hours, but not more than 120 hours.

(3) Control systems must be designed to treat the stormwater runoff from all surfaces generated by one and one-half inch of rainfall.

(4) Stormwater runoff from ~~built upon area~~impervious surface areas that is directed to flow through any wetlands shall flow into and through these wetlands at a non-erosive velocity.

(5) All structural stormwater treatment systems used to meet these requirements shall be designed to have a minimum of 85% average annual removal for total suspended solids (TSS).

(6) General engineering design criteria for all projects shall be in accordance with 15A NCAC 2H .1008(c), as explained in the design manual.

**Sec. 18-765. Standards for stormwater control measures**

(a) *Evaluation*. All stormwater control measures and stormwater treatment practices (also referred to as best management practices, or BMPs) required under this ordinance shall be evaluated by the city according to the policies, criteria, and information, including technical specifications and standards and the specific design criteria for each stormwater practice, in the design manuals. The City Manager shall determine whether proposed BMPs will be adequate to meet the requirements of this ordinance.

(b) *Determination of adequacy; presumptions and alternatives*. Stormwater treatment practices that are designed, constructed, and maintained in accordance with the criteria and specifications in the design manuals will be presumed to meet the minimum water quality and quantity performance standards of this ordinance. Whenever an applicant proposes to utilize a practice or practices not designed and constructed in accordance with the criteria and specifications in the design manual, the applicant shall have the burden of demonstrating that the practice(s) will satisfy the minimum water quality and quantity performance standards of this ordinance. The City Manager may require the applicant to provide the documentation, calculations, and examples necessary for the City Manager to determine whether such an affirmative showing is made.

(c) *Separation from seasonal high water table.*

(1) For BMPs that require a separation from the seasonal high water table, the separation shall be provided consistent with the design manual by at least 24 inches with at least twelve (12) inches of naturally occurring soil. No minimum separation from the seasonal high water table is required for a secondary stormwater best management practice that is used in a series with another stormwater best management practice.

(2) BMPs may be sited in fill soil provided the design is in accordance with the design manual for siting a BMP in fill soil.

**Sec. 18-766. Certain wetlands excluded from density calculations**

For the purposes of this section, areas defined as Coastal Wetlands under 15A NCAC 07H .0205, as measured landward from the normal high waterline, shall not be included in the overall project area to calculate impervious surface density. Wetlands that are not regulated as coastal wetlands pursuant to 15A NCAC 07H .0205 and that are located landward of the normal high waterline may be included in the overall project area to calculate impervious surface density.

**Sec. 18-767. Additional standards for special situations**

**(a)** *Limitation on the density of development*. Development shall be limited to ~~a built upon~~ an impervious surface area of twenty-five percent (25%) or less in areas classified on the Wilmington-New Hanover County CAMA Land Classification Map as "Watershed Resource Protection" unless they are exceptionally designed according to Article 10 of this Chapter.

(b) *Requirements for limited residential development.* For residential development activities within the city that are located within one-half mile and draining to Class SA waters, that have a ~~built upon area~~impervious surface area greater than twelve percent (12%), that do not require a stormwater management permit under Section 18-735 of this article, and that will add more than 10,000 square feet of ~~built upon area~~impervious surface area, a one-time, nonrenewable

stormwater management permit shall be obtained. The permit shall require recorded deed restrictions or protective covenants to ensure that the plans and specifications approved in the permit are maintained. Under this permit, stormwater runoff shall be managed using any one or combination of the following practices:

(1) Install rain cisterns or rain barrels designed to collect all rooftop runoff from the first one and one-half inches of rain. Rain barrels and cisterns shall be installed in such a manner as to facilitate the reuse of the collected rain water on site and shall be installed in such a manner that any overflow from these devices is directed to a vegetated area in a diffuse flow. Construct all uncovered driveways, uncovered parking areas, uncovered walkways, and uncovered patios out of permeable pavement or other pervious materials.

(2) Direct rooftop runoff from the first one and one-half inches of rain to an appropriately sized and designed rain garden. Construct all uncovered driveways, uncovered parking areas, uncovered walkways, and uncovered patios out of permeable pavement or other pervious materials.

(3) Install any other stormwater best management practice that meets the requirements of the design manual to control and treat the stormwater runoff from all ~~built upon area~~impervious surface areas of the site from the first one and one-half inches of rain.

**Sec. 18-768-- 18-780. Reserved.**

PART 4. MAINTENANCE

**Sec. 18-781. General standards for maintenance**

The owner of each structural BMP installed pursuant to this ordinance shall maintain and operate it so as to preserve and continue its function in controlling stormwater quality and quantity at the degree or amount of function for which the structural BMP was designed.

**Sec. 18-782. Operation and maintenance agreement**

(a) *General*. Prior to the conveyance or transfer of any lot or building site to be served by a structural BMP pursuant to this ordinance, and prior to issuance of any permit for development or redevelopment requiring a structural BMP pursuant to this ordinance, the applicant or owner of the site must execute an operation and maintenance agreement that shall be binding on all subsequent owners of the site, portions of the site, and lots or parcels served by the structural BMP. Until the transference of all property, sites, or lots served by the structural BMP, the original owner or applicant shall have primary responsibility for carrying out the provisions of the maintenance agreement.

The operation and maintenance agreement shall require the owner or owners to maintain, repair and, if necessary, reconstruct the structural BMP, and shall state the terms, conditions, and schedule of maintenance for the structural BMP. In addition, it shall grant to city a right of entry in the event that the City Manager or his designee has reason to believe it has become necessary to inspect, monitor, maintain, repair, or reconstruct the structural BMP; however, in no case shall the right of entry, of itself, confer an obligation on city to assume responsibility for the structural BMP.

The operation and maintenance agreement must be approved by the city prior to plan approval, and it shall be referenced on the final plat and shall be recorded with the county Register of Deeds upon final plat approval. A copy of the recorded maintenance agreement shall be given to the City Manager within fourteen (14) days following its recordation.

Conveyance of the property shall not terminate the original developer's obligations under this article until such time as a replacement permit is approved by the City Manager. The original developer shall include in the deed conveying the property notice of the existence of the stormwater control measures and the purchaser's obligations to maintain and inspect them and to obtain a permit and otherwise comply with the terms of this article.

(b) *Special requirement for homeowner and other associations*. For all structural BMPs required pursuant to this ordinance and that are to be or are owned and maintained by a homeowner association, property owner association, or similar entity, the required operation and maintenance agreement shall include all of the following provisions:

(1) Acknowledgment that the association shall continuously operate and maintain the stormwater control and management facilities.

(5) Granting to the city a right of entry to inspect, monitor, maintain, repair, and reconstruct structural BMPs.

(6) Allowing the city to recover from the association and its members any and all costs the city expends to maintain or repair the structural BMPs or to correct any operational deficiencies. Failure to pay the city all of its expended costs, after forty-five days written notice, shall constitute a breach of the agreement. In case of a deficiency, the city shall thereafter be entitled to bring an action against the association and its members to pay, or foreclose upon the lien hereby authorized by the agreement against the property, or both. Interest, collection costs, and attorney fees shall be added to the recovery.

(7) A statement that this agreement shall not obligate the city to maintain or repair any structural BMPs, and the city shall not be liable to any person for the condition or operation of structural BMPs.

(8) A statement that this agreement shall not in any way diminish, limit, or restrict the right of the city to enforce any of its ordinances as authorized by law.

(9) A provision indemnifying and holding harmless the city for any costs and injuries arising from or related to the structural BMP, unless the city has agreed in writing to assume the maintenance responsibility for the BMP and has accepted dedication of any and all rights necessary to carry out that maintenance.

**Sec. 18-783. Inspection program**

Inspections and inspection programs by the city may be conducted or established on any reasonable basis, including but not limited to routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; and joint inspections with other agencies inspecting under environmental, zoning, or safety laws. Inspections may include, but are not limited to, reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in BMPs; and evaluating the condition of BMPs.

If the owner or occupant of any property refuses to permit such inspection, the city shall proceed to obtain an administrative search warrant pursuant to G.S. 15-27.2 or its successor. No person shall obstruct, hamper, or interfere with the city personnel while carrying out his or her official duties.

**Sec. 18-784. Notice to owners, Recordation.**

The applicable operations and maintenance agreement, easements, or dedication and acceptance into public maintenance (whichever is applicable) pertaining to every structural BMP shall be referenced on the final plat and shall be recorded with the Register of Deeds upon final plat approval. If no subdivision plat is recorded for the site, then the operations and maintenance agreement, easements, or dedication and acceptance into public maintenance, whichever is

applicable shall be recorded with the Register of Deeds so as to appear in the chain of title of all subsequent purchasers under generally accepted searching standards.

**Sec. 18-785. Records of installation and maintenance activities**

The owner of each structural BMP shall keep records of inspections, maintenance, and repairs for at least five years from the date of creation of the record and shall submit the same upon reasonable request to the City Manager.

**Sec. 18-786. Nuisance**

The owner of each stormwater BMP shall maintain it so as not to create or result in a nuisance condition.

**Sec. 18-787. Maintenance easement**

Every structural BMP installed pursuant to this ordinance shall be made accessible for adequate maintenance and repair by a maintenance easement. The easement shall be recorded and its terms shall specify who may make use of the easement and for what purposes.

Sec. 18-788- 18-809. Reserved.

Amend Article 15, Definitions, by amending the following definitions to read as follows.

**Sec. 18-812. Definitions.**

*BMP or Structural BMP:* A physical device designed to trap, settle out, or filter pollutants from stormwater runoff; to alter or reduce stormwater runoff velocity, amount, timing, or other characteristics; to approximate the pre-development hydrology on a developed site; or to achieve any combination of these goals. Structural BMP includes physical practices such as constructed wetlands, vegetative practices, filter strips, grassed swales, and other methods installed or created on real property. "Structural BMP" is synonymous with "structural practice," "stormwater control facility," "stormwater control practice," "stormwater treatment practice," "stormwater management practice," "stormwater control measures," "structural stormwater treatment systems," and similar terms used in this ordinance.

*Design Storms:*

*One (1)-year, 24-hour storm*: The surface runoff resulting from a 24-hour rainfall of an intensity expected to be equaled or exceeded, on average, once in 12 months and with a duration of 24 hours.

*Two (2)-year frequency storm:* A storm of an intensity expected to occur on the average, once in two (2) years, and of a duration which will produce the peak rate of runoff for the watershed of interest.

*Ten (10)-year frequency storm:* The storm of an intensity expected to occur on the average, once in ten (10) years, and of a duration which will produce the peak rate of runoff for the watershed of interest.

Twenty- five (25)-year frequency storm: The storm of an intensity expected to occur on the average, once in twenty-five (25) years, and of a duration which will produce the peak rate of runoff for the watershed of interest.

*Impervious:* ~~The condition of being impenetrable by water.~~ Any surface which in whole or in part, restricts or prevents the natural absorption of water into the ground. Impervious surface areas shall include but are not limited to concrete, asphalt, compacted crushed stone and gravel surfaces or other paving material, unless specifically engineered to allow penetration of water through the paved medium and infiltrate into the ground, and all areas covered by the footprint of buildings or structures including roofs, decks, driveways, patios, retaining walls, sidewalks, parking areas, tennis courts, ~~concrete or asphalt~~ streets, ~~compacted crushed stone and gravel surfaces~~. Impervious does not include a wooden slatted deck, the water area of a swimming pool, or pervious or partially pervious paving material to the extent that the paving material absorbs water or allows water to infiltrate through the paving material.

*Larger common plan of development or sale:* Any area where multiple separate and distinct construction or land-disturbing activities will occur under one plan. A plan is any announcement or piece of documentation (including but not limited to a sign, public notice or hearing, sales pitch, advertisement, loan application, drawing, permit application, zoning request, or computer design) or physical demarcation (including but not limited to boundary signs, lot stakes, or surveyor markings) indicating that construction activities may occur on a specific plot.

*Stormwater*: Any flow resulting from, and occurring during or following, any form of natural precipitation.