Chapter 6. ENVIRONMENTAL PROTECTION

6.1 Purpose and Intent

The purpose of this chapter is to protect maintain and enhance public health, safety, environment and general welfare by establishing minimum requirements and procedures to control adverse effects of sediment and erosion control, post construction storm water runoff, illicit discharges, and flood damage. Proper management of storm water runoff will minimize damage to public and private property and infrastructure, safeguard the public health, safety and general welfare and protect water and aquatic life.

6.2 Sediment and Erosion Control

All new development and redevelopment shall be required to take measures to minimize erosion during construction and after development. All new development and redevelopment shall comply with the provisions of the latest adopted amendment to Wake County Erosion and Sedimentation Control Ordinance. Certification of compliance with or exemption from the plan requirements of such regulations shall be submitted to the Administrator prior to issuance of a Development Permit for a subdivision, or part thereof.

6.3 Post Construction Stormwater Management

A. Findings

It is hereby determined that:

1. Development alters the hydrologic response of local watersheds and increases storm water runoff rates and volumes, flooding, soil erosion, stream channel erosion, nonpoint source pollution, and sediment transport and deposition, as well as reducing groundwater recharge;

2. These changes in storm water 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

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

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

5. Therefore, the Town Council establishes this set of water quality and quantity regulations to meet the requirements of state and federal law regarding control of storm water runoff and discharge.

B. General Provisions

This ordinance seeks to meet its general purpose through the following specific objectives and means:

1. Establishing decision-making processes for developments that protect the integrity of watersheds and preserve the health of water resources;

2. Requiring that new development and redevelopment maintain the pre-development hydrologic response in their post-development state as nearly as practicable for the applicable design storm in order to reduce flooding, stream bank erosion, nonpoint source pollution and increases in stream temperature, and to maintain the integrity of stream channels and aquatic habitats;

3. Establishing minimum post-development storm water management standards and design criteria for the regulation and control of storm water runoff quantity and quality;

4. Establishing design and review criteria for the construction, function, and use of structural storm water control facilities that may be used to meet the minimum post-development storm water management standards;

5. Encouraging the use of better management and site design practices, such as the preservation of green space and other conservation areas, to the maximum extent practicable;

6. Establishing provisions for the long-term responsibility for and maintenance of structural and nonstructural storm water best management practices (BMPs) to ensure that they continue to function as designed, are maintained appropriately, and pose no threat to public safety;

7. Establishing administrative procedures for the submission, review, approval and disapproval of storm water management plans, for the inspection of approved projects, and to assure appropriate long-term maintenance.

8. Coordinating site design plans that include open space and natural areas with the *2027 Comprehensive Plan.*

C. Applicability

1. General

Beginning with and subsequent to its effective date, this ordinance shall be applicable to all development and redevelopment, including, but not limited to, site plan applications, subdivision applications, and grading applications, unless exempt pursuant to Section 6.3(C)(2), Exemptions, below.

2. Exemptions

a. Development and redevelopment that cumulatively disturbs less than one acre and is not part of a larger common plan of development or sale is exempt from the provisions of this ordinance.

b. Development and redevelopment that disturb less than one acre are not exempt if such activities are part of a larger common plan of development or sale, even though multiple, separate or distinct activities take place at different times on different schedules.

c. Activities that are exempt from permit requirements of Section 404 of the federal Clean Water Act, as specified in 40 CFR 302 (primarily, ongoing farming and forestry activities) are exempt from the provisions of this ordinance.

3. No Development or Redevelopment Until Compliance and Permit

No development or redevelopment 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.

D. Standard Specifications & Construction Details Manual

1. Reference to Manual

The Administrator shall use the policy, criteria, and information, including technical specifications and standards in the *Standard Specifications & Construction Details Manual* (hereinafter referred to simply as the *Manual*) as the basis for decisions about storm water permits and about the design, implementation and performance of structural and non-structural storm water BMPs.

The *Manual* includes a list of acceptable storm water treatment practices, including the specific design criteria for each storm water practice. Storm water treatment practices that are designed and constructed in accordance with these design and sizing criteria will be presumed to meet the minimum water quality performance standards of the NPDES Phase II laws.

2. Relationship of Manual to Other Laws and Regulations

If the specifications or guidelines of the *Manual* 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 *Manual*.

3. Amendments to Manual

The *Manual* 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 *Manual*, proposed changes shall be generally publicized and made available for review, and an opportunity for comment by interested persons shall be provided.

4. Changes to Standards and Specifications

If the standards, specifications, guidelines, policies, criteria or other information in the *Manual* are amended subsequent to the submittal of an application for approval pursuant to this ordinance but prior to approval, the new information shall control and shall be utilized in reviewing the application and in implementing this ordinance with regard to the application.

E. Stormwater Management Plan: A stormwater management plan is required for all development and redevelopment unless exempt pursuant to the provisions of 6.3(C)(2): Exemptions. Please refer to Section 16.13 for stormwater management plan requirements.

F. Standards

1. General Standards

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

2. Development Standards for Low-Density Projects

Low-density projects (less than 24% built upon area) shall implement stormwater control measures that comply with each of the following standards:

a. Storm water control measures shall control and treat the difference in storm water runoff volume leaving the project site between the pre- and post-development conditions for, at a minimum, the 1-year, 24-hour storm. Runoff volume drawdown time shall be a minimum of 24 hours, but nor more than 120 hours.

b. All built-upon area shall be at a minimum of 50 feet landward of all perennial and intermittent surface waters. A perennial or intermittent surface water shall be 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 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). An exception to this requirement may be allowed when surface waters are not present in accordance with the provisions of 15A NCAC 2B .0233 (3)(a) or similar site-specific determination made using Division-approved methodology.

c. The approval of the storm water 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 and redevelopment maintains the site consistent with the approved project plans.

3. Development Standards for High-Density Projects

High-density projects (greater than 24% built upon area) shall implement storm water control measures that comply with each of the following standards:

a. The measures shall control and treat the difference in storm water runoff volume leaving the project site between the pre- and post-development conditions for, at a minimum, the 1-year, 24-hour storm. Runoff volume drawdown time shall be a minimum of 24 hours, but not more than 120 hours.

b. All structural storm water treatment systems used to meet the requirements of the program shall be designed to have a minimum of 85% average annual removal for Total Suspended Solids;

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

d. All built-upon area shall be at a minimum of 50 feet landward of all perennial and intermittent surface waters. A 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 or the most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the USGS. An exception to this requirement may be allowed when surface waters are not present in accordance with the provisions of 15A NCAC 2B .0233 (3)(a) or similar site-specific determination made using Division-approved methodology.

e. The approval of the storm water permit shall require an enforceable restriction on property usage that runs with the land, such as recorded deed restrictions or protective covenants, to ensure that future development and redevelopment maintains the site consistent with the approved project plans.

4. Standards for Storm water Control Measures

a. Evaluation According to Contents of *Manual*

All BMPs required under this ordinance shall be evaluated by the Administrator according to the policies, criteria, and information, including technical specifications and standards and the specific design criteria for each storm water practice, in the *Manual*. The Administrator shall determine whether they will be adequate to meet the requirements of this ordinance.

b. Determination of Adequacy; Presumptions and Alternatives

Storm water treatment practices that are designed, constructed, and maintained in accordance with the criteria and specifications in the *Manual* 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 *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 Administrator may require the applicant to provide such documentation, calculations, and examples as necessary for the Administrator to determine whether such an affirmative showing is made.

5. Additional Standards for Special Situations

a. Class SA Waters: Additional Standard for Fecal Coliform

In addition to the standards for storm water handling set out in the *Manual*, development and redevelopment that drains in whole or part to class SA waters shall design and implement the best storm water practices that ensure reduction of fecal coliform loading. The best practices are ones that result in the highest degree of fecal die-off and control sources of fecal coliform to the maximum extent practicable while still meeting the other requirements of this ordinance.

b. No direct discharge or expansion of discharges to SA waters

No new direct points of storm water discharge to SA waters or expansion of existing points of discharge to any constructed storm water conveyance systems, or constructed system of conveyances that discharge to SA waters, shall be permitted. "Expansion", for purposes of this section, means an increase in drainage area or an increase in impervious surface within the drainage area resulting in a net increase in peak flow or volume from the 1 year, 24 hour storm. Overland sheet flow of storm water or storm water discharge to a wetland, vegetated buffer or other natural area capable of providing treatment or absorption will not be considered a direct point of storm water discharge for the purposes of this ordinance.

c. Nutrient Sensitive Waters

In addition to the standards for storm water handling set out in the design manual, development and redevelopment that drains in whole or part to class NSW waters shall design and implement the best storm water practices that reduce nutrient loading, while still meeting the other requirements of this ordinance.

6. Onsite Wastewater

a. Operation and maintenance requirements

New and replaced onsite systems for domestic wastewater installed after the effective date of this ordinance shall be subject to the same requirements for operation and maintenance as are structural BMPs for storm water, including, at a minimum, annual inspection reports and a recorded operation and maintenance agreement, pursuant to Section 6.3(G) of this ordinance and Wake County Health Department.

b. Standards for operation and maintenance

Onsite systems for domestic wastewater covered by this ordinance shall be operated and maintained so as to avoid adverse effects on surface water and groundwater, including eutrophication of surface water and microbial or nitrate contamination of groundwater. Septic tank residuals shall be pumped whenever necessary to assure the proper operation of the system to meet these standards, and the septage shall be reused or disposed of in a manner that does not present significant risks to human health, surface water or groundwater.

G. Maintenance

1. General Standards for Maintenance

a. Function of BMPs As Intended

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 storm water quality and quantity at the degree or amount of function for which the structural BMP was designed.

b. Annual Maintenance Inspection and Report

The person responsible for maintenance of any structural BMP installed pursuant to this ordinance shall submit to the Administrator an inspection report from a qualified registered North Carolina professional engineer, surveyor, or landscape architect performing services only in their area of competence. 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 the lot of each structural BMP;

iii. A statement that an inspection was made of all structural BMPs;

iv. The date the inspection was made;

v. A statement that all inspected structural BMPs are performing properly and are in compliance with the terms and conditions of the approved maintenance agreement required by Section 6.3(G)(2) of this ordinance; and

vi. The original signature and seal of the engineer, surveyor, or landscape architect.

All inspection reports shall be on forms supplied by the Administrator. An original inspection report shall be provided to the 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.

2. Operation and Maintenance Agreement

a. In 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 the Town a right of entry in the event that the Administrator 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 the Town to assume responsibility for the structural BMP.

The operation and maintenance agreement must be approved by the Administrator 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 Administrator within 14 days following its recordation.

b. Special Requirement for Homeowners' and Other Associations

For all structural BMPs required pursuant to this ordinance and that are to be or are owned and maintained by a homeowners' association, property owners' association or similar entity, the required operation and maintenance agreement shall include all of the following provisions:

i. Acknowledgment that the association shall continuously operate and maintain the storm water control and management facilities.

ii. Establishment of an escrow account, which can be spent solely for sediment removal, structural, biological or vegetative replacement, major repair or reconstruction of the structural BMPs. If structural BMPs are not performing adequately or as intended or are not properly maintained, the Town, in its sole discretion, may remedy the situation, and in such instances the Town shall be fully reimbursed from the escrow account. Escrowed funds may be spent by the association for sediment removal, structural, biological or vegetative replacement, major repair and reconstruction of the structural BMPs, provided that the Town shall first consent to the expenditure.

iii. Both developer contribution and annual sinking funds shall fund the escrow account. Prior to plat recordation or issuance of construction permits, whichever shall first occur, the developer shall pay into the escrow account an amount equal to 15 per cent of the initial construction cost of the structural BMPs. Two-thirds (2/3) of the total amount of sinking fund budget shall be deposited into the escrow account within the first five (5) years and the full amount shall be deposited within ten (10) years following initial construction of the structural BMPs. Funds shall be deposited each year into the escrow account. A portion of the annual assessments of the association shall include an allocation into the escrow account. Any funds drawn down from the escrow account shall be replaced in accordance with the schedule of anticipated work used to create the sinking fund budget.

iv. The percent of developer contribution and lengths of time to fund the escrow account may be varied by the Town depending on the design and materials of the storm water control and management facility.

v. Granting to the Town a right of entry to inspect, monitor, maintain, repair, and reconstruct structural BMPs.

vi. Allowing the Town to recover from the association and its members any and all costs the Town expends to maintain or repair the structural BMPs or to correct any operational deficiencies. Failure to pay the Town all of its expended costs, after forty-five days written notice, shall constitute a breach of the agreement. The Town 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, in case of a deficiency. Interest, collection costs, and attorney fees shall be added to the recovery.

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

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

3. Inspection Program

Inspections and inspection programs by the Town 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 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.

Should the owner or occupant of any property refuse to permit such inspection, the Administrator 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 Administrator while carrying out his or her official duties.

4. Notice to Owners

a. Deed Recordation and Indications On Plat

The applicable operations and maintenance agreement , conservation easement, 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 county Register of Deeds upon final plat approval. If no subdivision plat is recorded for the site, then the operations and maintenance agreement, conservation easement, or dedication and acceptance into public maintenance, whichever is applicable shall be recorded with the county Register of Deeds so as to appear in the chain of title of all subsequent purchasers under generally accepted searching principles.

b. Signage

Where appropriate in the determination of the Administrator to assure compliance with this ordinance, structural BMPs shall be posted with a conspicuous sign stating who is responsible for required maintenance and annual inspection. The sign shall be maintained so as to remain visible and legible.

5. 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 Administrator.

6. Nuisance

The owner of each storm water BMP, whether structural or non-structural BMP, shall maintain it so as not to create or result in a nuisance condition.

7. 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.

6.4 Illicit Discharge and Connection to Storm water

A. Purpose/Intent

The purpose of this ordinance is to provide for the health, safety, and general welfare of the citizens of the Town through the regulation of non-storm water discharges to the storm drainage system to the maximum extent practicable as required by federal and state law. This ordinance establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process. The objectives of this ordinance are:

1. To regulate the contribution of pollutants to the MS4 by storm water discharges by any user; and

2. To prohibit Illicit Connections and Discharges to the municipal separate storm sewer system; and

3. To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this ordinance.

B. Applicability

This ordinance shall apply to all water entering the storm drain system generated on any developed and undeveloped lands unless explicitly exempted by an authorized enforcement agency.

C. Ultimate Responsibility

The standards set forth herein and promulgated pursuant to this ordinance are minimum standards; therefore this ordinance does not intend nor imply that compliance by any person will ensure that there will be no contamination, pollution or unauthorized discharge of pollutants.

D. Discharge Prohibitions

1. Prohibition of Illegal Discharges

No person shall discharge or cause to be discharged into the municipal storm drain system or watercourses any materials, including but not limited to pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality standards, other than storm water. The commencement, conduct or continuance of any illegal discharge to the storm drain system is prohibited except as described as follows:

a. The following discharges are exempt from discharge prohibitions established by this ordinance: water-line flushing or other potable water sources, landscape irrigation or lawn watering, diverted stream flows, rising ground water, ground water infiltration to storm drains, uncontaminated pumped ground water, foundation or footing drains (not including active groundwater dewatering systems), crawl space pumps, air conditioning condensation, springs, non-commercial washing of vehicles, natural riparian habitat or wet-land flows, swimming pools (if dechlorinated - typically less than one PPM chlorine), fire fighting activities and any other water source not containing pollutants.

b. Discharges specified in writing by the authorized enforcement agency as being necessary to protect public health and safety.

c. Dye testing is an allowable discharge, but requires a verbal notification to the authorized enforcement agency prior to the time of the test.

d. The prohibition shall not apply to any non-storm water discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Federal Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm drain system.

2. Prohibition of Illicit Connections

a. The construction, use, maintenance or continued existence of illicit connections to the storm drain system is prohibited.

b. This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

c. A person is considered to be in violation of this ordinance if the person connects a line conveying sewage to the MS4, or allows such a connection to continue.

E. Suspension of MS4 Access

1. Suspension due to Illicit Discharges in Emergency Situations

The Administrator may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the MS4 or Waters of the United States. If the violator fails to comply with a suspension order issued in an emergency, the authorized enforcement agency may take such steps as deemed necessary to prevent or minimize damage to the MS4 or Waters of the United States, or to minimize danger to persons.

2. Suspension due to the Detection of Illicit Discharge

Any person discharging to the MS4 in violation of this ordinance may have their MS4 access terminated if such termination would abate or reduce an illicit discharge. The authorized enforcement agency will notify a violator of the proposed termination of its MS4 access. The violator may petition the authorized enforcement agency for a reconsideration and hearing.

A person commits an offense if the person reinstates MS4 access to premises terminated pursuant to this Section, without the prior approval of the authorized enforcement agency.

F. Industrial or Construction Activity Discharges

Any person subject to an industrial or construction activity NPDES storm water discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the Administrator prior to the allowing of discharges to the MS4.

G. Monitoring of Discharges

1. Applicability

This section applies to all facilities that have storm water discharges associated with industrial activity, including construction activity.

2. Access to Facilities

a. The Administrator shall be permitted to enter and inspect facilities subject to regulation under this ordinance as often as may be necessary to determine compliance with this ordinance. If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to representatives of the authorized enforcement agency.

b. Facility operators shall allow the Administrator ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records that must be kept under the conditions of an NPDES permit to discharge storm water, and the performance of any additional duties as defined by state and federal law.

c. The Administrator shall have the right to set up on any permitted facility such devices as are necessary in the opinion of the authorized enforcement agency to conduct monitoring and/or sampling of the facility's storm water discharge.

d. The Administrator has the right to require the discharger to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure storm water flow and quality shall be calibrated to ensure their accuracy.

e. Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the operator at the written or oral request of the Administrator and shall not be replaced. The costs of clearing such access shall be borne by the operator.

f. Unreasonable delays in allowing the Administrator access to a permitted facility is a violation of a storm water discharge permit and of this ordinance. A person who is the operator of a facility with a NPDES permit to discharge storm water associated with industrial activity commits an offense if the person denies the authorized enforcement agency reasonable access to the permitted facility for the purpose of conducting any activity authorized or required by this ordinance.

g. If the Administrator has been refused access to any part of the premises from which storm water is discharged, and he/she is able to demonstrate probable cause to believe that there may be a violation of this ordinance, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this ordinance or any order issued hereunder, or to protect the overall public health, safety, and welfare of the community, then the authorized enforcement agency may seek issuance of a search warrant from any court of competent jurisdiction.

H. Requirement to Prevent, Control and Reduce Storm Water Pollutants by the Use of BMPs

The Administrator will adopt requirements identifying BMPs for any activity, operation or facility which may cause or contribute to pollution or contamination of storm water, the storm drain system, or waters of the U.S. The owner or operator of a commercial or industrial establishment shall provide, at their own expense, reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses through the use of these structural and non-structural BMPs. Further, any person responsible for a property or premise, which is, or may be, the source of an illicit discharge, may be required to implement, at said person's expense, additional structural and non-structural BMPs to prevent the further discharge of pollutants to the municipal separate storm sewer system. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of storm water associated with industrial activity, to the extent practicable, shall be deemed compliance with the provisions of this section. These BMPs shall be part of a storm water pollution prevention plan (SWPP) as necessary for compliance with requirements of the NPDES permit.

I. Watercourse Protection

Every person owning property through which a watercourse passes or such person's lessee, shall keep and maintain that part of the watercourse within the property free of trash, debris, excessive vegetation and other obstacles that would pollute, contaminate or significantly retard the flow of water through the watercourse. In addition, the owner or lessee shall maintain existing privately owned structures within or adjacent to a watercourse, so that such structures will not become a hazard to the use, function or physical integrity of the watercourse.

J. Notification of Spills

Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into storm water, the storm drain system, or water of the U.S. said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials said person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, said person shall notify the authorized enforcement agency in person or by phone or facsimile no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the Administrator within three (3) business days of the phone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three (3) years.

6.5 Flood Damage Prevention

A. Findings of Fact

1. The flood prone areas within the jurisdiction of the Town are subject to periodic inundation which results in loss of life, property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures of flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.

2. These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities, and by the occupancy in flood prone areas by uses vulnerable to floods or hazardous to other lands which are inadequately elevated, flood-proofed, or otherwise unprotected from flood damages.

B. Statement of Purpose

It is the purpose of this ordinance to promote public health, safety and general welfare and to minimize public and private losses due to flood conditions within flood prone areas by provisions designed to:

1. restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion, flood heights or velocities; and

2. require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction; and

3. control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of flood waters; and

4. control filling, grading, dredging, and all other development which may increase erosion or flood damage; and

5. prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

C. General Provisions

1. Basis for Establishing the Special Flood Hazard Areas

The Special Flood Hazard Areas and Future Conditions Flood Hazard Areas are those identified by the Federal Emergency management Administration (FEMA) or produced under the Cooperating Technical State (CTS) agreement between the State of North Carolina and FEMA in its Flood Insurance Study (FIS) and its accompanying Flood Insurance Rate Maps (FIRMs), for Wake County dated May 2, 2006, which are adopted by reference and declared to be a part of this ordinance. The Special Flood Hazard Areas and Future Conditions Flood Hazard Areas also include those defined through standard engineering analysis for private

developments or by governmental agencies, but which have not yet been incorporated in the FIRM. This includes, but is not limited to, detailed flood data:

a. generated as a requirement of this ordinance;

b. preliminary FIRMs where more stringent than the effective FIRM; or

c. post-disaster Flood Recovery Maps.

2. Establishment of Floodplain Development Permit

A Floodplain Development Permit shall be required in conformance with the provisions of this ordinance prior to the commencement of any development activities within Special Flood Hazard Areas and Future Conditions Flood Hazard Areas determined in 6.5(C)(1).

3. Compliance

No structure or land shall hereafter be located, extended, converted, altered, or developed in any way without full compliance with the terms of this ordinance and other applicable regulations.

4. Abrogation and Greater Restrictions

This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

5. Interpretation

In the interpretation and application of this ordinance, all provisions shall be:

a. considered as minimum requirements;

b. liberally construed in favor of the governing body; and,

c. deemed neither to limit nor repeal any other powers granted under State statutes

6. Warning and Disclaimer of Liability

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur on rare occasions. Actual flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the Special Flood Hazard Areas and Future Conditions Flood Hazard Areas or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of the Town or by any officer or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

D. Administration

1. Floodplain Development Permit Data Requirements

The following information shall be provided at a minimum on the Floodplain Development Permit to ensure compliance with this code.

a. A description of the development to be permitted under the floodplain development permit issuance.

b. The Special Flood Hazard Area or Future Conditions Flood Hazard Area determination for the proposed development per available data specified in Section 6.5(C)(1).

c. The regulatory flood protection elevation required for the reference level and all attendant utilities.

d. The regulatory flood protection elevation required for the protection of all public utilities.

e. All certification submittal requirements with timelines.

f. States that no fill material shall encroach into the floodway or non-encroachment area of any watercourse, if applicable.

g. The flood openings requirements as dictated by FEMA Technical Bulletin 1-93 Opening in Foundation Walls, if in Zones A, AE or X (Future).

h. State limitations of below BFE enclosure uses. (i.e., Parking, Building Access and Limited Storage only).

2. Certification Requirements

a. Elevation Certificates

i. An Elevation Certificate (FEMA Form 81-31) is required after the reference level is completed. Within 21 calendar days of establishment of the reference level elevation, it shall be the duty of the permit holder to submit to the Administrator a certification of the elevation of the reference level in relation to mean sea level. Said certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same. Any work done within the 21 day calendar period and prior to submission of the certification shall be at the permit holder's risk. The Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit the certification or failure to make said corrections required shall be cause to issue a stop-work order for the project.

ii. A Final As-Built Elevation Certificate (FEMA Form 81-31) is required after construction is completed and prior to Certificate of Compliance/Occupancy issuance. It shall be the duty of the permit holder to submit to the Administrator a certification of final as-built construction of the elevation of the reference level and all attendant utilities. Said certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same. The Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to Certificate of Compliance/Occupancy issuance. In some instances, another certification may be required to certify corrected as-built construction. Failure to submit the certification or failure to make said corrections required shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy.

iii. If a watercourse is to be altered or relocated, a description of the extent of watercourse alteration or relocation; an engineering report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream; and a map showing the location of the proposed watercourse alteration or relocation shall all be submitted by the permit applicant prior to issuance of a floodplain development permit.

b. Floodproofing Certificate

If non-residential floodproofing is used to meet the regulatory flood protection elevation requirements, a Floodproofing Certificate (FEMA Form 81-65), with supporting data and an operation plan, is required prior to the start of any new construction. It shall be the duty of the permit holder to submit to the Administrator a certification of the floodproofed design elevation of the reference level and all attendant utilities, in relation to mean sea level. Floodproofing certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. The Administrator shall review the certificate data and plan. Deficiencies detected by such review shall be corrected by the applicant prior to permit approval. Failure to submit the certification or failure to make required correction shall be cause to deny a floodplain development permit. Failure to construct in accordance with the certified design shall be cause to withhold the issuance of a Certificate of Occupancy.

c. Certification Exemptions: The following structures, if located within Zones A, AE or X (Future), are exempt from the elevation/floodproofing certification requirements specified in 6.5(D)(2)(a) and (b):

i. Recreational Vehicles meeting requirements of Section 6.5(E)(3)(f);

ii. Temporary Structures meeting requirements of Section 6.5(E)(3)(g); and

iii. Accessory Structures less than 150 square feet meeting requirements of Section 6.5(E)(3)(h).

E. Provisions for Flood Hazard Reduction

1. Floodways and Non-Encroachment Areas

Located within the Special Flood Hazard Areas established in Section 6.5(C)(1) are areas designated as floodways or non-encroachment areas. The floodways and non-encroachment areas are extremely hazardous areas due to the velocity of floodwaters that have erosion potential and carry debris and potential projectiles. The following provisions shall apply to all development within such areas:

a. No encroachments, including fill, new construction, substantial improvements and other developments shall be permitted unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood. Such certification and technical data shall be presented to the floodplain administrator prior to issuance of floodplain development permit.

b. If Section 6.4(E)(1)(a) is satisfied, all development shall comply with all applicable flood hazard reduction provisions of this ordinance.

c. No manufactured homes shall be permitted, except replacement manufactured homes in an existing manufactured home park or subdivision provided the following provisions are met:

i. the anchoring and the elevation standards of Section 6.5(E)(3)(c); and

ii. the no encroachment standards of Section 6.4(E)(1)(a) are met.

2. General Standards

a. All new construction and substantial improvements, where permitted, shall be:

i. Anchored to prevent flotation, collapse, or lateral movement of the structure; and

ii. Constructed with materials and utility equipment resistant to flood damage; and

iii. Constructed by methods and practices that minimize flood damages.

b. Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding. These include but are not limited to HVAC equipment, water softener units, bath/kitchen fixtures, ductwork, electric meter panels/boxes, utility/cable boxes, appliances (i.e., washers, dryers, refrigerator, etc.), hot water heaters, and electric outlets/switches.

c. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.

d. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters.

e. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.

f. Any alteration, repair, reconstruction, or improvements to a structure, which is in compliance with the provisions of this ordinance, shall meet the requirements of "new construction" as contained in this ordinance.

g. Non-conforming structures or other development may not be enlarged, replaced, or rebuilt unless such enlargement or reconstruction is accomplished in conformance with the provisions of this ordinance. Provided, however, nothing in this ordinance shall prevent the repair, reconstruction, or replacement of a building or structure existing on the effective date of this ordinance and located totally or partially within the floodway, non-encroachment area, or stream setback, provided that the bulk of the building or structure below the regulatory flood protection elevation in the floodway, non-encroachment area, or stream setback is not increased and provided that such repair, reconstruction, or replacement meets all of the other requirements of this ordinance.

h. New solid waste disposal facilities, hazardous waste management facilities, salvage yards, and chemical storage facilities shall not be permitted in Special Flood Hazard Areas or Future Conditions Flood Hazard Areas. A structure or tank for chemical or fuel storage incidental to an allowed use or to the operation of a water treatment plant or wastewater treatment facility maybe located in a Special Flood Hazard Area or Future Conditions Flood Hazard Area only if the structure or tank is either elevated or floodproofed to at least the regulatory flood protection elevation and certified according to Section 6.5(D)(2) of this code.

3. Specific Standards

In all Special Flood Hazard Areas where BFE data has been provided and in Future Conditions Flood Hazard Areas where Future Conditions Flood Elevations data has been provided, as set forth in Section 6.5(C)(1), the following provisions are required:

a. Residential Construction

New construction or substantial improvement of any residential structure (including manufactured homes) shall have the reference level, including basement, elevated no lower than two feet above the regulatory flood protection elevation or established BFE.

b. Non-Residential Construction

New construction or substantial improvement of any commercial, industrial, or other non-residential structure shall have the reference level, including basement, elevated no lower than the regulatory flood protection elevation. Structures located in A, AE and X (Future) Zones may be floodproofed to the regulatory flood protection elevation in lieu of elevation provided that all areas of the structure below the required flood protection elevation are watertight with walls substantially impermeable to the passage of water, using structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the official as set forth in Section 6.5(D)(2).

c. Manufactured Homes

New or replacement manufactured homes shall be elevated so that the reference level of the manufactured home is no lower than the regulatory flood protection elevation. In no case shall manufactured mobile homes be allowed in an A, AE or X (Future) Zone.

d. Elevated Buildings

New construction or substantial improvements of elevated buildings that include fully enclosed areas that are below the regulatory flood protection elevation shall not be designed to be used for human habitation, but shall be designed to be used only for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises, be constructed entirely of flood resistant materials below the regulatory flood protection level in A, AE or X (Future) zones and meet the following design criteria:

i. Measures for complying with this requirement shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. To meet this requirement, the foundation must either be certified by a professional engineer or architect or meet the following minimum design criteria:

a) Provide a minimum of two openings on different sides of each enclosed area subject to flooding.

b) The total net area of all openings must be at least one (1) square inch for each square foot of each enclosed area subject to flooding.

c) If a building has more than one enclosed area, each area must have openings on exterior walls to allow floodwater to automatically enter and exit;

d) The bottom of all required openings shall be no higher than one (1) foot above the adjacent grade; and,

e) Openings may be equipped with screens, louvers, or other opening coverings or devices provided they permit the automatic flow of floodwaters in both directions.

f) Foundation enclosures:

(i). Vinyl or sheet metal skirting is not considered an enclosure for regulatory and flood insurance rating purposes. Therefore such skirting does not require hydrostatic openings as outlined above.

(ii). Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires hydrostatic openings as outlined above to comply with this ordinance.

ii. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator). The interior portion of such enclosed area shall not be partitioned or finished into separate rooms, except to enclose storage areas.

e. Additions/Improvements

i. Additions and/or improvements to pre-FIRM structures whereas the addition and/or improvements in combination with any interior modifications to the existing structure

a) are not a substantial improvement, the addition and/or improvements must be designed to minimize flood damages and must not be any more non-conforming than the existing structure.

b) is a substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards for new construction.

ii. Additions to post-FIRM structures with no modifications to the existing structure shall require only the addition to comply with the standards for new construction.

iii. Additions and/or improvements to post-FIRM structures whereas the addition and/or improvements in combination with any interior modifications to the existing structure

a) are not a substantial improvement, the addition and/or improvements only must comply with the standards for new construction.

b) are a substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards for new construction.

iv. Where a fire wall or independent perimeter load-bearing wall is provided between the addition and the existing building, the addition(s) shall be considered a separate building and only the addition must comply with the standards for new construction.

f. Recreational Vehicles

Recreation vehicles shall not be allowed within a Special Flood Hazard Area or a Future Conditions Flood Hazard Area. Furthermore, they shall be on site for fewer than 180 consecutive days and be fully licensed and ready for highway use (A recreational vehicle is read for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and has no permanently attached additions).

g. Temporary Structures

Prior to the issuance of a floodplain development permit for a temporary structure, (i.e. Construction Trailer) the following requirements must be met:

i. Applicants must submit to the floodplain administrator a plan for the removal of such structure(s) in the event of a hurricane or flash flood warning notification. The plan must include the following information:

a) a specified time period for which the temporary use will be permitted;

b) the name, address, and phone number of the individual responsible for the removal of the temporary structure;

c) the time frame prior to the event at which a structure will be removed (i.e. minimum of 72 hours before landfall of a hurricane or immediately upon flood warning notification);

d) a copy of the contract or other suitable instrument with a trucking company to insure the availability of removal equipment when needed; and

e) designation, accompanied by documentation, of a location outside the Special Flood Hazard Area or Future Conditions Flood Hazard Area to which the temporary structure will be moved.

ii. The above information shall be submitted in writing to the floodplain administrator for review and written approval.=

h. Accessory Structures

When accessory structures (sheds, detached garages, etc.) are to be placed within a Special Flood Hazard Area or Future Conditions Flood Hazard Area, the following criteria shall be met:

i. Accessory structures shall not be used for human habitation (including work, sleeping, living, cooking or restroom areas);

ii. Accessory structures shall be designed to have low flood damage potential;

iii. Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters;

iv. Accessory structures shall be firmly anchored in accordance with Section 6.5(E)(2)(a);

v. All service facilities such as electrical and heating equipment shall be installed in accordance with Section 6.5(E)(2)(b); and

vi. Openings to relieve hydrostatic pressure during a flood shall be provided below regulatory flood protection elevation in conformance with Section 6.5(E)(3)(d)(i).

vii. An accessory structure with a footprint less than 150 square feet does not require an elevation or floodproofing certificate. Elevation or floodproofing certifications are required for all other accessory structures in accordance with Section 6.5(D)(2).

viii. Accessory structures shall not be temperature-controlled;

4. Subdivisions and Major Developments

All subdivisions and major development proposals located with Special Flood Hazard Areas or Future Conditions Flood Hazard Areas shall:

a. be consistent with the need to minimize flood damage;

b. have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;

c. have adequate drainage provided to reduce exposure to flood hazards; and,

d. have received all necessary permits from those governmental agencies for which approval is required by Federal or State law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.

5. Standards for Floodplains Without Established Base Flood Elevations

Within the Special Flood Hazard Areas designated as Approximate Zone A and established in Section 6.5(C)(1), where no BFE data has been provided, the following provisions shall apply:

a. No encroachments, including fill, new construction, substantial improvements or new development shall be permitted within a distance of

fifty feet each side from top of bank or five times the width of the stream whichever is greater, unless certification with supporting technical data by a registered professional engineer is provided demonstrating that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

b. The BFE used in determining the regulatory flood protection elevation shall be determined based on one of the following criteria set in priority order:

i. If BFE data is available from other sources, all new construction and substantial improvements within such areas shall also comply with all applicable provisions of this ordinance and shall be elevated or floodproofed in accordance with Section 6.5(D)(2).

ii. All subdivision and major development proposals shall provide BFE data if development is greater than five (5) acres or has more than 50 lots/manufactured home sites. Such BFE data shall be adopted by reference per Section 6.5(C)(1) to be utilized in implementing this ordinance.

iii. When BFE data is not available from a Federal, State, or other source as outlined above, the reference level, including basement, shall be elevated at least two (2) feet above the highest adjacent grade.

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