
CHAPTER 12 - ENVIRONMENTAL CONSERVATION STANDARDS

12.1 Purpose and Intent.

This Chapter sets forth standards for environmental protection and conservation in the Town of Waynesville's land use jurisdiction concerning a variety of different environmental issues. The Town of Waynesville possesses an abundance of unique natural assets. The standards set forth in this section address the enhancement and preservation of these important features. (Article VIII summary)

12.2 Land Suitability.

Land subject to flood hazard, improper drainage, erosion, landslides or that is for topographical or other reasons unsuitable for development as determined by the Town of Waynesville, shall not be platted or developed for residential use nor for any other uses that will continue or increase the danger to health, safety, or property unless the hazards are corrected or mitigated.

12.2.1 Landfill Development.

Areas that have been used for the disposal of solid waste shall not be subdivided into commercial or residential building sites. This includes areas that have been used for the disposal of trash, demolition waste, construction debris, stumps, and other waste materials.

12.3 Flood Damage Prevention.

12.3.1 Statutory Authorization, Findings of Fact, Purpose and Objectives.

- A. **Statutory Authorization:** The Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Articles 7, 9, 11, and 13 of Chapter 160D; and Article 8 of Chapter 160A; and Article 7, 9, and 11 of Chapter 160D of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare.

Therefore, the Town Council of the Town of Waynesville, North Carolina, does ordain as follows:

- B. **Findings of Fact:**
- (1) The flood prone areas within the jurisdiction of the Town of Waynesville 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 of uses vulnerable to floods or other hazards.
- C. **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 that are dangerous to health, safety, and property due to water or erosion hazards or that result in damaging increases in erosion, flood heights or velocities;

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- (2) Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction;
 - (3) Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of floodwaters;
 - (4) Control filling, grading, dredging, and all other development that may increase erosion or flood damage; and
 - (5) Prevent or regulate the construction of flood barriers that will unnaturally divert flood waters or which may increase flood hazards to other lands.

D. Objectives.

The objectives of this ordinance are to:

- (1) Protect human life, safety, and health;
- (2) Minimize expenditure of public money for costly flood control projects;
- (3) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (4) Minimize prolonged business losses and interruptions;
- (5) Minimize damage to public facilities and utilities (i.e. water and gas mains, electric, telephone, cable and sewer lines, streets, and bridges) that are located in flood prone areas;
- (6) Minimize damage to private and public property due to flooding;
- (7) Make flood insurance available to the community through the National Flood Insurance Program;
- (8) Maintain the natural and beneficial functions of floodplains;
- (9) Help maintain a stable tax base by providing for the sound use and development of flood prone areas; and
- (10) Ensure that potential buyers are aware that property is in a Special Flood Hazard Area.

12.3.2 General Provisions.

A. Applicability.

This ordinance shall apply to all Special Flood Hazard Areas within the jurisdiction, including Extra-Territorial Jurisdictions (ETJs), of the Town of Waynesville and within the jurisdiction of any other community whose governing body agrees, by resolution, to such applicability.

B. Basis for Establishing the Special Flood Hazard Areas.

The Special Flood Hazard Areas are those identified under the Cooperating Technical State (CTS) agreement between the State of North Carolina and FEMA in its FIS dated April 3, 2012 for Haywood County and associated DFIRM panels, including any digital data developed as part of the FIS, which are adopted by reference and declared a part of this ordinance, and all revisions thereto.

The initial Flood Insurance Rate Maps are as follows for the jurisdictional areas at the initial date:

- Haywood County Unincorporated Area, dated July 15, 1984
- Town of Waynesville, dated January 6, 1983

C. **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 determined in accordance with the provisions of Section 12.3.2.B.

D. **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.

E. **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.

F. **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.

G. **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. 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 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 of Waynesville 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.

H. **Penalties for Violation.**

Violation of the provisions of this ordinance or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute a Class 1 misdemeanor pursuant to NC G.S. § 143-215.58. Any person who violates this ordinance or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than \$100.00 or imprisoned for not more than thirty (30) days, or both. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the Town of Waynesville from taking such other lawful action as is necessary to prevent or remedy any violation.

12.3.3 Administration.

A. **Designation of Floodplain Administrator.**

The Land Development Administrator, or his or her designee, hereinafter referred to as the "Floodplain Administrator", is hereby appointed to administer and implement the provisions of this ordinance. In instances where the Floodplain Administrator receives assistance from others to complete tasks to administer and implement this ordinance, the Floodplain Administrator shall

be responsible for the coordination and community's overall compliance with the National Flood Insurance Program and the provisions of this ordinance.

B. Floodplain Development Application, Permit and Certification Requirements.

- (1) **Application Requirements.** Application for a Floodplain Development Permit shall be made to the Floodplain Administrator prior to any development activities located within Special Flood Hazard Areas. The following items shall be presented to the Floodplain Administrator to apply for a floodplain development permit:
- (a) A plot plan drawn to scale which shall include, but shall not be limited to, the following specific details of the proposed floodplain development:
 - (i) The nature, location, dimensions, and elevations of the area of development/disturbance; existing and proposed structures, utility systems, grading/pavement areas, fill materials, storage areas, drainage facilities, and other development;
 - (ii) The boundary of the Special Flood Hazard Area as delineated on the FIRM or other flood map as determined in Section 12.3.2.B, or a statement that the entire lot is within the Special Flood Hazard Area;
 - (iii) Flood zone(s) designation of the proposed development area as determined on the FIRM or other flood map as determined in Section 12.3.2.B;
 - (iv) The boundary of the floodway(s) or non-encroachment area(s) as determined in Section 12.3.2.B;
 - (v) The Base Flood Elevation (BFE) where provided as set forth in Sections 12.3.2.B; 12.3.3.C; or 12.3.3.D;
 - (vi) The old and new location of any watercourse that will be altered or relocated as a result of proposed development; and
 - (vii) The certification of the plot plan by a registered land surveyor or professional engineer.
 - (b) Proposed elevation, and method thereof, of all development within a Special Flood Hazard Area including but not limited to:
 - (i) Elevation in relation to mean sea level of the proposed reference level (including basement) of all structures;
 - (ii) Elevation in relation to mean sea level to which any non-residential structure in Zone AE, A or AO will be floodproofed; and
 - (iii) Elevation in relation to mean sea level to which any proposed utility systems will be elevated or floodproofed.
 - (c) If floodproofing, a Floodproofing Certificate (FEMA Form 81-65) with supporting data, an operational plan, and an inspection and maintenance plan that include, but are not limited to, installation, exercise, and maintenance of floodproofing measures.
 - (d) A Foundation Plan, drawn to scale, which shall include details of the proposed foundation system to ensure all provisions of this ordinance are met. These details include but are not limited to:

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- (i) The proposed method of elevation, if applicable (i.e., fill, solid foundation perimeter wall, solid backfilled foundation, open foundation on columns/posts/piers/piles/shear walls); and
 - (ii) Openings to facilitate automatic equalization of hydrostatic flood forces on walls in accordance with Section 12.3.4.B(4)(c) when solid foundation perimeter walls are used in Zones A, AE, AH, AO, A99.
- (e) Usage details of any enclosed areas below the lowest floor.
 - (f) Plans and/or details for the protection of public utilities and facilities such as sewer, gas, electrical, and water systems to be located and constructed to minimize flood damage.
 - (g) Certification that all other Local, State and Federal permits required prior to floodplain development permit issuance have been received.
 - (h) Documentation for placement of Recreational Vehicles and/or Temporary Structures, when applicable, to ensure that the provisions of Section 12.3.4.B, subsections (6) and (7) of this ordinance are met.
 - (i) A description of proposed watercourse alteration or relocation, when applicable, including 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 (if not shown on plot plan) showing the location of the proposed watercourse alteration or relocation.
- (2) **Permit Requirements.** The Floodplain Development Permit shall include, but not be limited to:
- (a) A complete description of all the development to be permitted under the floodplain development permit (e.g. house, garage, pool, septic, bulkhead, cabana, pier, bridge, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials, etc.).
 - (b) The Special Flood Hazard Area determination for the proposed development in accordance with available data specified in Section 12.3.2.B.
 - (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) A statement that no fill material or other development shall encroach into the floodway or non-encroachment area of any watercourse, unless the requirements of 12.3.4.F have been met.
 - (g) The flood openings requirements, if in Zones A, AO, AE or A1-30.
 - (h) Limitations of below BFE enclosure uses (if applicable). (i.e., parking, building access and limited storage only).
 - (i) A statement, that all materials below BFE/RFPE must be flood resistant materials.

(3) **Certification Requirements.**

(a) Elevation Certificates.

- (i) An Elevation Certificate (FEMA Form FF-206-FY-22-152) is required prior to the actual start of any new construction. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the elevation of the reference level, in relation to mean sea level. The Floodplain Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder prior to the beginning of construction. Failure to submit the certification or failure to make required corrections shall be cause to deny a floodplain development permit.
- (ii) An Elevation Certificate (FEMA Form FF-206-FY-22-152) is required after the reference level is established. Within seven (7) calendar days of establishment of the reference level elevation, it shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the elevation of the reference level, in relation to mean sea level. Any work done within the seven (7) day calendar period and prior to submission of the certification shall be at the permit holder's risk. The Floodplain Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further work being permitted to proceed. Failure to submit the certification or failure to make required corrections shall be cause to issue a stop-work order for the project.
- (iii) A final as-built Elevation Certificate (FEMA Form FF-206-FY-22-152) 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 Floodplain Administrator a certification of final as-built construction of the elevation of the reference level and all attendant utilities. The Floodplain 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 required corrections shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy.

(b) Floodproofing Certificate.

- (i) If non-residential floodproofing is used to meet the Regulatory Flood Protection Elevation requirements, a Floodproofing Certificate (FEMA Form FF-206-FY-22-153), with supporting data, an operational plan, and an inspection and maintenance plan are required prior to the actual start of any new construction. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the floodproofed design elevation of the reference level and all attendant utilities, in relation to NAVD 1988. Floodproofing certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. The Floodplain Administrator shall review the certificate data, the operational plan, and the inspection and maintenance 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 corrections 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 Compliance/Occupancy.

- (ii) A final Finished Construction Floodproofing Certificate (FEMA Form FF-206-FY-22-153), with supporting data, an operational plan, and an inspection and maintenance plan are required prior to the issuance of a Certificate of Compliance/Occupancy. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the floodproofed design elevation of the reference level and all attendant utilities, in relation to NAVD 1988. Floodproofing certificate shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. The Floodplain Administrator shall review the certificate data, the operational plan, and the inspection and maintenance plan. Deficiencies detected by such review shall be corrected by the applicant prior to Certificate of Occupancy. Failure to submit the certification or failure to make required corrections shall be cause to deny a Floodplain Development Permit. Failure to construct in accordance with the certified design shall be cause to deny a Certificate of Compliance/Occupancy.
- (c) If a manufactured home is placed within Zone A, AE, AH, AO, A99 and the elevation of the chassis is more than 36 inches in height above grade, an engineered foundation certification is required in accordance with the provisions of Section 12.3.4.B(3)(b).
- (d) If a watercourse is to be altered or relocated, a description of the extent of watercourse alteration or relocation; a professional engineer's certified 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.
- (e) Certification Exemptions. The following structures, if located within Zones A, AE, AH, AO, A99, are exempt from the elevation/floodproofing certification requirements specified in items (a) and (b) of this subsection:
 - (i) Recreational Vehicles meeting requirements of Section 12.3.4.B(6)(a);
 - (ii) Temporary Structures meeting requirements of Section 12.3.4.B(7); and
 - (iii) Accessory Structures less than 150 square or have a total cost of \$5,000 or less and meet requirements of Section 12.3.4.B(8).

(4) Determinations for existing buildings and structures.

For applications for building permits to improve buildings and structures, including alterations, movement, enlargement, replacement, repair, change of occupancy, additions, rehabilitations, renovations, substantial improvements, repairs of substantial damage, and any other improvement of or work on such buildings and structures, the Floodplain Administrator, in coordination with the Building Official, shall:

- (a) Estimate the market value, or require the applicant to obtain an appraisal of the market value prepared by a qualified independent appraiser, of the building or structure before the start of construction of the proposed work; in the case of repair, the market value of the building or structure shall be the market value before the damage occurred and before any repairs are made;

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- (b) Compare the cost to perform the improvement, the cost to repair a damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, if applicable, to the market value of the building or structure;
 - (c) Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage; and
 - (d) Notify the applicant if it is determined that the work constitutes substantial improvement or repair of substantial damage and that compliance with the flood resistant construction requirements of the NC Building Code and this ordinance is required.

C. Duties and Responsibilities of the Floodplain Administrator.

The Floodplain Administrator shall perform, but not be limited to, the following duties:

- (1) Review all floodplain development applications and issue permits for all proposed development within Special Flood Hazard Areas to assure that the requirements of this ordinance have been satisfied.
- (2) Review all proposed development within Special Flood Hazard Areas to assure that all necessary Local, State and Federal permits have been received, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.
- (3) Notify adjacent communities and the North Carolina Department of Public Safety, Division of Emergency Management, State Coordinator for the National Flood Insurance Program prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency (FEMA).
- (4) Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is maintained.
- (5) Prevent encroachments into floodways and non-encroachment areas unless the certification and flood hazard reduction provisions of Section 12.3.4.F are met.
- (6) Obtain actual elevation (in relation to mean sea level) of the reference level (including basement) and all attendant utilities of all new and substantially improved structures, in accordance with the provisions of Section 12.3.3.B(3).
- (7) Obtain actual elevation (in relation to NAVD 1988) to which all new and substantially improved structures and utilities have been floodproofed, in accordance with the provisions of Section 12.3.3.B(3).
- (8) Obtain actual elevation (in relation to NAVD 1988) of all public utilities in accordance with the provisions of Section 12.3.3.B(3).
- (9) When floodproofing is utilized for a particular structure, obtain certifications from a registered professional engineer or architect in accordance with the provisions of Section 12.3.3.B(3) and Section 12.3.4.B(2).
- (10) Where interpretation is needed as to the exact location of boundaries of the Special Flood Hazard Areas, floodways, or non-encroachment areas (for example, where there appears to be a conflict between a mapped boundary and actual field conditions), make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this article.
- (11) When Base Flood Elevation (BFE) data has not been provided in accordance with the provisions of Section 12.3.2.B, obtain, review, and reasonably utilize any BFE data, along with floodway data or non-encroachment area data available from a Federal, State, or

other source, including data developed pursuant to Section 12.3.4.D(2)(b), in order to administer the provisions of this ordinance.

- (12) When Base Flood Elevation (BFE) data is provided but no floodway or non-encroachment area data has been provided in accordance with the provisions of Section 12.3.2.B, obtain, review, and reasonably utilize any floodway data or non-encroachment area data available from a Federal, State, or other source in order to administer the provisions of this ordinance.
- (13) When the lowest floor and the lowest adjacent grade of a structure or the lowest ground elevation of a parcel in a Special Flood Hazard Area is above the Base Flood Elevation (BFE), advise the property owner of the option to apply for a Letter of Map Amendment (LOMA) from FEMA. Maintain a copy of the LOMA issued by FEMA in the floodplain development permit file.
- (14) Permanently maintain all records that pertain to the administration of this ordinance and make these records available for public inspection, recognizing that such information may be subject to the Privacy Act of 1974, as amended.
- (15) Make on-site inspections of work in progress. As the work pursuant to a floodplain development permit progresses, the Floodplain Administrator shall make as many inspections of the work as may be necessary to ensure that the work is being done according to the provisions of the local ordinance and the terms of the permit. In exercising this power, the Floodplain Administrator has a right, upon presentation of proper credentials, to enter on any premises within the jurisdiction of the community at any reasonable hour for the purposes of inspection or other enforcement action.
- (16) Issue stop-work orders as required. Whenever a building or part thereof is being constructed, reconstructed, altered, or repaired in violation of this ordinance, the Floodplain Administrator may order the work to be immediately stopped. The stop-work order shall be in writing and directed to the person doing or in charge of the work. The stop-work order shall state the specific work to be stopped, the specific reason(s) for the stoppage, and the condition(s) under which the work may be resumed. Violation of a stop-work order constitutes a misdemeanor.
- (17) Revoke floodplain development permits as required. The Floodplain Administrator may revoke and require the return of the floodplain development permit by notifying the permit holder in writing stating the reason(s) for the revocation. Permits shall be revoked for any substantial departure from the approved application, plans, and specifications; for refusal or failure to comply with the requirements of State or local laws; or for false statements or misrepresentations made in securing the permit. Any floodplain development permit mistakenly issued in violation of an applicable State or local law may also be revoked.
- (18) Make periodic inspections throughout the Special Flood Hazard Areas within the jurisdiction of the community. The Floodplain Administrator and each member of his or her inspections department shall have a right, upon presentation of proper credentials, to enter on any premises within the territorial jurisdiction of the department at any reasonable hour for the purposes of inspection or other enforcement action.
- (19) Follow through with corrective procedures of Section 12.3.3.D.
- (20) Review, provide input, and make recommendations for variance requests.
- (21) Maintain a current map repository to include, but not limited to, the FIS Report, FIRM and other official flood maps and studies adopted in accordance with the provisions of Section

12.3.2.B of this ordinance, including any revisions thereto including Letters of Map Change, issued by FEMA. Notify State and FEMA of mapping needs.

- (22) Coordinate revisions to FIS reports and FIRMs, including Letters of Map Revision Based on Fill (LOMR-Fs) and Letters of Map Revision (LOMRs).

D. Corrective Procedures.

- (1) Violations to be Corrected: When the Floodplain Administrator finds violations of applicable State and local laws, it shall be his or her duty to notify the owner or occupant of the building of the violation. The owner or occupant shall immediately remedy each of the violations of law cited in such notification.
- (2) Actions in Event of Failure to Take Corrective Action: If the owner of a building or property shall fail to take prompt corrective action, the Floodplain Administrator shall give the owner written notice, by certified or registered mail to the owner's last known address or by personal service, stating:
 - (a) That the building or property is in violation of the floodplain management regulations;
 - (b) That a hearing will be held before the Floodplain Administrator at a designated place and time, not later than ten (10) days after the date of the notice, at which time the owner shall be entitled to be heard in person or by counsel and to present arguments and evidence pertaining to the matter; and
 - (c) That following the hearing, the Floodplain Administrator may issue an order to alter, vacate, or demolish the building; or to remove fill as applicable.
- (3) Order to Take Corrective Action: If, upon a hearing held pursuant to the notice prescribed above, the Floodplain Administrator shall find that the building or development is in violation of the Flood Damage Prevention Ordinance, he or she shall issue an order in writing to the owner, requiring the owner to remedy the violation within a specified time period, not less than sixty (60) calendar days, nor more than one-hundred eighty (180) calendar days. Where the Floodplain Administrator finds that there is imminent danger to life or other property, he or she may order that corrective action be taken in such lesser period as may be feasible.
- (4) Appeal: Any owner who has received an order to take corrective action may appeal the order to the local elected governing body by giving notice of appeal in writing to the Floodplain Administrator and the clerk within ten (10) days following issuance of the final order. In the absence of an appeal, the order of the Floodplain Administrator shall be final. The local governing body shall hear an appeal within a reasonable time and may affirm, modify and affirm, or revoke the order.
- (5) Failure to Comply with Order: If the owner of a building or property fails to comply with an order to take corrective action for which no appeal has been made or fails to comply with an order of the governing body following an appeal, the owner shall be guilty of a Class 1 misdemeanor pursuant to NC G.S. § 143-215.58 and shall be punished at the discretion of the court.

E. Variance Procedures.

- (1) The Board of Adjustment as established by the Town of Waynesville, hereinafter referred to as the "appeal board", shall hear and decide requests for variances from the requirements of this ordinance.

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- (2) Any person aggrieved by the decision of the appeal board may appeal such decision to the Court, as provided in Chapter 7A of the North Carolina General Statutes.
 - (3) Variances may be issued for:
 - (a) The repair or rehabilitation of historic structures upon the determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and that the variance is the minimum necessary to preserve the historic character and design of the structure;
 - (b) Functionally dependent facilities if determined to meet the definition as stated in Section 17.5, provided provisions of Section 12.3.3.E(9)(b), (c), and (e) have been satisfied, and such facilities are protected by methods that minimize flood damages during the base flood and create no additional threats to public safety; or
 - (c) Any other type of development, provided it meets the requirements of this Section.
 - (4) In passing upon variances, the appeal board shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this ordinance, and:
 - (a) The danger that materials may be swept onto other lands to the injury of others;
 - (b) The danger to life and property due to flooding or erosion damage;
 - (c) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - (d) The importance of the services provided by the proposed facility to the community;
 - (e) The necessity to the facility of a waterfront location as defined under Section 17.5 as a functionally dependent facility, where applicable;
 - (f) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
 - (g) The compatibility of the proposed use with existing and anticipated development;
 - (h) The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
 - (i) The safety of access to the property in times of flood for ordinary and emergency vehicles;
 - (j) The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and
 - (k) The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.
 - (5) A written report addressing each of the above factors shall be submitted with the application for a variance.

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- (6) Upon consideration of the factors listed above and the purposes of this ordinance, the appeal board may attach such conditions to the granting of variances as it deems necessary to further the purposes and objectives of this ordinance.
 - (7) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the Base Flood Elevation (BFE) and the elevation to which the structure is to be built and that such construction below the BFE increases risks to life and property, and that the issuance of a variance to construct a structure below the BFE will result in increased premium rates for flood insurance up to \$25 per \$100 of insurance coverage. Such notification shall be maintained with a record of all variance actions, including justification for their issuance.
 - (8) The Floodplain Administrator shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency and the State of North Carolina upon request.
 - (9) Conditions for Variances:
 - (a) Variances shall not be issued when the variance will make the structure in violation of other Federal, State, or local laws, regulations, or ordinances.
 - (b) Variances shall not be issued within any designated floodway or non-encroachment area if the variance would result in any increase in flood levels during the base flood discharge.
 - (c) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 - (d) Variances shall only be issued prior to development permit approval.
 - (e) Variances shall only be issued upon:
 - (i) A showing of good and sufficient cause;
 - (ii) A determination that failure to grant the variance would result in exceptional hardship; and
 - (iii) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, or extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
 - (10) A variance may be issued for solid waste disposal facilities or sites, hazardous waste management facilities, salvage yards, and chemical storage facilities that are located in Special Flood Hazard Areas provided that all of the following conditions are met.
 - (a) The use serves a critical need in the community.
 - (b) No feasible location exists for the use outside the Special Flood Hazard Area.
 - (c) The reference level of any structure is elevated or floodproofed to at least the Regulatory Flood Protection Elevation.
 - (d) The use complies with all other applicable Federal, State and local laws.
 - (e) The Town of Waynesville has notified the Secretary of the North Carolina Department of Public Safety of its intention to grant a variance at least thirty (30) calendar days prior to granting the variance.

12.3.4 Provisions for Flood Hazard Reduction.

A. General Standards.

In all Special Flood Hazard Areas the following provisions are required:

- (1) All new construction and substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse, and lateral movement of the structure.
- (2) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage in accordance with the FEMA Technical Bulletin 2, *Flood Damage-Resistant Materials Requirements*.
- (3) All new construction and substantial improvements shall be constructed by methods and practices that minimize flood damages.
- (4) All new electrical, heating, ventilation, air-conditioning, plumbing, duct systems, and other building utility systems, equipment, and service facilities must be located at or above the Regulatory Flood Protection Elevation (RFPE) and/or specially designed to prevent water from entering or accumulating within the components and installed to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to the design flood elevation. Utility systems, equipment, and service facilities include, but are not limited to, HVAC equipment, water softener units, bath/kitchen plumbing fixtures, ductwork, electric/gas meter panels/boxes, utility/cable boxes, water heaters, fuel tanks, and electric outlets/switches.
 - a) Replacements part of a substantial improvement must also meet the above provisions.
 - b) Replacements that are for maintenance and not part of a substantial improvement, may be installed at the original location provided the addition and/or improvements comply with the standards for new construction consistent with the code and requirements for the original structure.
- (5) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.
- (6) 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.
- (7) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.
- (8) 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.
- (9) 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 there is no additional encroachment below the Regulatory Flood Protection Elevation in the floodway, non-encroachment area, or stream setback, and provided that such repair, reconstruction, or replacement meets all of the other requirements of this ordinance.
- (10) New solid waste disposal facilities and sites, hazardous waste management facilities, salvage yards, and chemical storage facilities shall not be permitted, except by variance as specified in Section 12.3.3.E(10). 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 may be located in a Special Flood Hazard Area only if the structure or tank is either elevated or floodproofed to at least the Regulatory Flood Protection Elevation and certified in accordance with the provisions of Section 12.3.3.B(3).

- (11) All subdivision proposals and other development proposals shall be consistent with the need to minimize flood damage.
- (12) All subdivision proposals and other development proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
- (13) All subdivision proposals and other development proposals shall have adequate drainage provided to reduce exposure to flood hazards.
- (14) All subdivision proposals and other development proposals shall 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.
- (15) When a structure is partially located in a Special Flood Hazard Area, the entire structure shall meet the requirements for new construction and substantial improvements.
- (16) Buildings and structures that are located in more than one flood hazard area shall comply with the provisions associated with the most restrictive flood hazard area.

B. Specific Standards.

In all Special Flood Hazard Areas where Base Flood Elevation (BFE) data has been provided, as set forth in Section 12.3.2.B, or Section 12.3.4.D, the following provisions, in addition to the provisions of Section 12.3.4.A, are required:

- (1) Residential Construction. New construction and substantial improvement of any residential structure (including manufactured homes) shall have the reference level, including basement, elevated no lower than the Regulatory Flood Protection Elevation, as defined in Section 17.4.
- (2) Non-Residential Construction. New construction and 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, as defined in Section 17.4. Structures located in Zones A, AE, AH, AO, A99 may be floodproofed to the Regulatory Flood Protection Elevation in lieu of elevation provided that all areas of the structure, together with attendant utility and sanitary facilities, below the Regulatory 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. For AO Zones, the floodproofing elevation shall be in accordance with Section 12.3.4.G(2). A registered professional engineer or architect shall certify that the floodproofing standards of this subsection are satisfied. Such certification shall be provided to the Floodplain Administrator as set forth in Section 12.3.3.B(3), along with the operational plan and the inspection and maintenance plan.
- (3) Manufactured Homes.
 - (a) New and replacement manufactured homes shall be elevated so that the reference level of the manufactured home is no lower than the Regulatory Flood Protection Elevation, as defined in Section 17.4.

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- (b) Manufactured homes shall be securely anchored to an adequately anchored foundation to resist flotation, collapse, and lateral movement, either by certified engineered foundation system, or in accordance with the most current edition of the State of North Carolina Regulations for Manufactured Homes adopted by the Commissioner of Insurance pursuant to NCGS 143-143.15. Additionally, when the elevation would be met by an elevation of the chassis thirty-six (36) inches or less above the grade at the site, the chassis shall be supported by reinforced piers or engineered foundation. When the elevation of the chassis is above thirty-six (36) inches in height, an engineering certification is required.
 - (c) All enclosures or skirting below the lowest floor shall meet the requirements of Section 12.3.4.B(4).
 - (d) An evacuation plan must be developed for evacuation of all residents of all new, substantially improved or substantially damaged manufactured home parks or subdivisions located within flood prone areas. This plan shall be filed with and approved by the Floodplain Administrator and the local Emergency Management Coordinator.
- (4) Elevated Buildings. Fully enclosed area, of new construction and substantially improved structures, which is below the lowest floor:
- (a) Shall not be designed or used for human habitation, but shall only be used for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment (standard exterior door), or entry to the living area (stairway or elevator). The interior portion of such enclosed area shall not be finished or partitioned into separate rooms, except to enclose storage areas;
 - (b) Shall not be temperature-controlled or conditioned;
 - (c) Shall be constructed entirely of flood resistant materials at least to the Regulatory Flood Protection Elevation; and
 - (d) Shall include, in Zones A, AO, AE, and A1-30, flood openings to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters. To meet this requirement, the openings must either be certified by a professional engineer or architect or meet or exceed the following minimum design criteria:
 - (i) A minimum of two flood openings on different sides of each enclosed area subject to flooding;
 - (ii) The total net area of all flood openings must be at least one (1) square inch for each square foot of enclosed area subject to flooding;
 - (iii) If a building has more than one enclosed area, each enclosed area must have flood openings to allow floodwaters to automatically enter and exit;
 - (iv) The bottom of all required flood openings shall be no higher than one (1) foot above the higher of the interior or exterior adjacent grade;
 - (v) Flood openings may be equipped with screens, louvers, or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions; and

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- (vi) Enclosures made of flexible skirting are not considered enclosures for regulatory purposes, and, therefore, do not require flood openings. Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires flood openings as outlined above.

(5) Additions/Improvements.

- (a) Additions and/or improvements to pre-FIRM structures when the addition and/or improvements in combination with any interior modifications to the existing structure are:
 - (i) 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.
 - (ii) A substantial improvement, with modifications/rehabilitations/improvements to the existing structure or the common wall is structurally modified more than installing a doorway, both the existing structure and the addition must comply with the standards for new construction.
- (b) Additions to pre-FIRM or post-FIRM structures that are a substantial improvement with no modifications/rehabilitations/improvements to the existing structure other than a standard door in the common wall, shall require only the addition to comply with the standards for new construction.
- (c) Additions and/or improvements to post-FIRM structures when the addition and/or improvements in combination with any interior modifications to the existing structure are:
 - (i) Not a substantial improvement, the addition and/or improvements only must comply with the standards for new construction consistent with the code and requirements for the original structure..
 - (ii) A substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards for new construction.
- (b) Any combination of repair, reconstruction, rehabilitation, addition or improvement of a building or structure taking place during a one-year period, the cumulative cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started must comply with the standards for new construction. For each building or structure, the one-year period begins on the date of the first improvement or repair of that building or structure subsequent to the effective date of this ordinance. Substantial damage also means flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damage occurred. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed. The requirement does not, however, include either:

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- (i) Any project for improvement of a building required to correct existing health, sanitary or safety code violations identified by the building official and that are the minimum necessary to assume safe living conditions.
 - (ii) Any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.
- (6) Recreational Vehicles. Recreational vehicles shall either:
- (a) Be on site for fewer than 180 consecutive days and be fully licensed and ready for highway use (a recreational vehicle is ready 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); or
 - (b) Meet all the requirements for new construction.
- (7) Temporary Non-Residential Structures. Prior to the issuance of a floodplain development permit for a temporary structure, the applicant must submit to the Floodplain Administrator a plan for the removal of such structure(s) in the event of a hurricane, flash flood or other type of flood warning notification. The following information shall be submitted in writing to the Floodplain Administrator for review and written approval:
- (a) A specified time period for which the temporary use will be permitted. Time specified may not exceed three (3) months, renewable up to one (1) year;
 - (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 the entity responsible for physical removal of the structure; and
 - (e) Designation, accompanied by documentation, of a location outside the Special Flood Hazard Area, to which the temporary structure will be moved.
- (8) Accessory Structures. When accessory structures (sheds, detached garages, etc.) are to be placed within a Special Flood Hazard Area, the following criteria shall be met:
- (a) Accessory structures shall not be used for human habitation (including working, sleeping, living, cooking or restroom areas);
 - (b) Accessory structures shall not be temperature-controlled;
 - (c) Accessory structures shall be designed to have low flood damage potential;
 - (d) Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters;
 - (e) Accessory structures shall be firmly anchored in accordance with the provisions of Section 12.3.4.A(1);
 - (f) All service facilities such as electrical shall be installed in accordance with the provisions of Section 12.3.4.A(4); and
 - (g) Flood openings to facilitate automatic equalization of hydrostatic flood forces shall be provided below Regulatory Flood Protection Elevation in conformance with the provisions of Section 12.3.4.B(4)(c).

An accessory structure with a footprint less than 150 square feet or that is a minimal investment of \$3,000 or less and satisfies the criteria outlined above is not required to meet the elevation or floodproofing standards of 12.3.4.B(2). Elevation or floodproofing certifications are required for all other accessory structures in accordance with 12.3.3.B(3).

(9) Tanks. When gas and liquid storage tanks are to be placed within a Special Flood Hazard Area, the following criteria shall be met:

- (a) Underground tanks. Underground tanks in flood hazard areas shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads during conditions of the design flood, including the effects of buoyancy assuming the tank is empty;
- (b) Above-ground tanks, elevated. Above-ground tanks in flood hazard areas shall be elevated to or above the Regulatory Flood Protection Elevation on a supporting structure that is designed to prevent flotation, collapse, or lateral movement during conditions of the design flood. Tank-supporting structures shall meet the foundation requirements of the applicable flood hazard area;
- (c) Above-ground tanks, not elevated. Above-ground tanks that do not meet the elevation requirements of 12.3.4.B(2) of this ordinance shall be permitted in flood hazard areas provided the tanks are designed, constructed, installed, and anchored to resist all flood-related and other loads, including the effects of buoyancy, during conditions of the design flood and without release of contents in the floodwaters or infiltration by floodwaters into the tanks. Tanks shall be designed, constructed, installed, and anchored to resist the potential buoyant and other flood forces acting on an empty tank during design flood conditions.
- (d) Tank inlets and vents. Tank inlets, fill openings, outlets and vents shall be:
 - (i) At or above the Regulatory Flood Protection Elevation or fitted with covers designed to prevent the inflow of floodwater or outflow of the contents of the tanks during conditions of the design flood; and
 - (ii) Anchored to prevent lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the design flood.

(10) Other Development.

- (a) Fences in regulated floodways and NEAs that have the potential to block the passage of floodwaters, such as stockade fences and wire mesh fences, shall meet the limitations of 12.3.4.F of this ordinance.
- (b) Retaining walls, sidewalks and driveways in regulated floodways and NEAs. Retaining walls and sidewalks and driveways that involve the placement of fill in regulated floodways shall meet the limitations of 12.3.4.F of this ordinance.
- (c) Roads and watercourse crossings in regulated floodways and NEAs. Roads and watercourse crossings, including roads, bridges, culverts, low-water crossings and similar means for vehicles or pedestrians to travel from one side of a watercourse to the other side, that encroach into regulated floodways shall meet the limitations of 12.3.4.F of this ordinance.
- (d) Commercial storage facilities are not considered "limited storage" as noted in this ordinance, and shall be protected to the Regulatory Flood Protection Elevation as required for commercial structures.

[C. **Reserved.**]

D. Standards for Floodplains without Established Base Flood Elevations.

Within the Special Flood Hazard Areas designated as Approximate Zone A and established in Section 12.3.2.B, where no Base Flood Elevation (BFE) data has been provided by FEMA, the following provisions, in addition to the provisions of Section 12.3.4.A, shall apply:

- (1) No encroachments, including fill, new construction, substantial improvements or new development shall be permitted within a distance of twenty (20) 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.
- (2) The BFE used in determining the Regulatory Flood Protection Elevation shall be determined based on the following criteria:
 - (a) When Base Flood Elevation (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 standards in Sections 12.3.4.A and B.
 - (b) When floodway or non-encroachment data is available from a Federal, State, or other source, all new construction and substantial improvements within floodway and non-encroachment areas shall also comply with the requirements of Sections 12.3.4.B and F.
 - (c) All subdivision, manufactured home park and other development proposals shall provide Base Flood Elevation (BFE) data if development is greater than five (5) acres or has more than fifty (50) lots/manufactured home sites. Such Base Flood Elevation (BFE) data shall be adopted by reference in accordance with Section 12.3.2.B and utilized in implementing this ordinance.
 - (d) When Base Flood Elevation (BFE) data is not available from a Federal, State, or other source as outlined above, the reference level shall be elevated or floodproofed (nonresidential) to or above the Regulatory Flood Protection Elevation, as defined in Section 17.4. All other applicable provisions of Section 12.3.4.B shall also apply.

E. Standards for Riverine Floodplains with Base Flood Elevations but Without Established Floodways or Non-Encroachment Areas.

Along rivers and streams where Base Flood Elevation (BFE) data is provided by FEMA or is available from another source but neither floodway nor non-encroachment areas are identified for a Special Flood Hazard Area on the FIRM or in the FIS report, the following requirements shall apply to all development within such areas:

- (1) Standards of Sections 12.3.4.A and B; and
- (2) Until a regulatory floodway or non-encroachment area is designated, no encroachments, including fill, new construction, substantial improvements, or other development, shall be permitted unless certification with supporting technical data by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point within the community.

F. Floodways and Non-Encroachment Areas.

Areas designated as floodways or non-encroachment areas are located within the Special Flood Hazard Areas established in Section 12.3.2.B. 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, in addition to standards outlined in Sections 12.3.4.A and B, shall apply to all development within such areas:

- (1) No encroachments, including fill, new construction, substantial improvements and other developments shall be permitted unless:
 - (a) It is demonstrated that the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood, based on hydrologic and hydraulic analyses performed in accordance with standard engineering practice and presented to the Floodplain Administrator prior to issuance of floodplain development permit, or
 - (b) A Conditional Letter of Map Revision (CLOMR) has been approved by FEMA. A Letter of Map Revision (LOMR) must also be obtained upon completion of the proposed encroachment.
- (2) If Section 12.3.4.F(1) is satisfied, all development shall comply with all applicable flood hazard reduction provisions of this ordinance.
- (3) No manufactured homes shall be permitted, except replacement manufactured homes in an existing manufactured home park or subdivision, provided the following provisions are met:
 - (a) The anchoring and the elevation standards of Section 12.3.4.B(3); and
 - (b) The no encroachment standard of Section 12.3.4.F(1).

G. Standards for Areas of Shallow Flooding (Zone AO).

Located within the Special Flood Hazard Areas established in Section 12.3.2.B, are areas designated as shallow flooding areas. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate. In addition to Sections 12.3.4.A and B, all new construction and substantial improvements shall meet the following requirements:

- (1) The reference level shall be elevated at least as high as the depth number specified on the Flood Insurance Rate Map (FIRM), in feet, plus a freeboard of one (1) foot, or at least four (4) feet above the highest adjacent grade if no depth number is specified.
- (2) Non-residential structures may, in lieu of elevation, be floodproofed to the same level as required in Section 12.3.4.G(1) so that the structure, together with attendant utility and sanitary facilities, below that level shall be watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. Certification is required in accordance with Section 12.3.3.B(3) and Section 12.3.4.B(2).
- (3) Adequate drainage paths shall be provided around structures on slopes, to guide floodwaters around and away from proposed structures.

H. Standards for Areas of Shallow Flooding (Zone AH).

Located within the Special Flood Hazard Areas established in 12.3.2.B, are areas designated as shallow flooding areas. These areas are subject to inundation by 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are one (1) to three (3) feet. Base Flood Elevations are derived from detailed hydraulic analyses are shown in this zone. In addition to 12.3.4.A and B, all new construction and substantial improvements shall meet the following requirements:

- (1) Adequate drainage paths shall be provided around structures on slopes, to guide floodwaters around and away from proposed structures.

12.3.4 Legal Status Provisions.

A. Effect on Rights and Liabilities Under the Existing Flood Damage Prevention Ordinance.

This ordinance in part comes forward by re-enactment of some of the provisions of the Flood Damage Prevention Ordinance enacted November 10, 1981, as amended, and it is not the intention to repeal but rather to re-enact and continue to enforce without interruption of such existing provisions, so that all rights and liabilities that have accrued thereunder are reserved and may be enforced. The enactment of this ordinance shall not affect any action, suit or proceeding instituted or pending. All provisions of the Flood Damage Prevention Ordinance of the Town of Waynesville enacted on November 10, 1981, as amended, which are not reenacted herein are repealed.

The date of the initial Flood Damage Prevention Ordinance for Haywood County is July 15, 1984.

B. Effect Upon Outstanding Floodplain Development Permits.

Nothing herein contained shall require any change in the plans, construction, size, or designated use of any development or any part thereof for which a floodplain development permit has been granted by the Floodplain Administrator or his or her authorized agents before the time of passage of this ordinance; provided, however, that when construction is not begun under such outstanding permit within a period of six (6) months subsequent to the date of issuance of the outstanding permit, construction or use shall be in conformity with the provisions of this ordinance.

C. Severability.

If any section, clause, sentence, or phrase of the Ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, then said holding shall in no way effect the validity of the remaining portions of this Ordinance.

D. Effective Date.

This ordinance shall become effective upon adoption.

12.4 Sedimentation and Erosion Control (from 154.401).

12.4.1 Purpose.

This section is adopted in accordance with the North Carolina Sedimentation Pollution Control Act of 1973 as amended for the purpose of regulating certain land-disturbing activity to control accelerated erosion and sedimentation in order to prevent the pollution of water and other damages to watercourses and public and private property by sedimentation.

12.4.2 Applicability.

This section shall not apply to the following land-disturbing activities:

- A. Activities, including the breeding and grazing of livestock, undertaken on agricultural land for the production of plants and animals useful to man.
- B. Activities undertaken on forestland for the production and harvesting of timber and timber products and conducted in accordance with best management practices set out in Forest Practice Guidelines Related to Water Quality, as adopted by the North Carolina Department of Environment, Health and Natural Resources. If not conducted in accordance with these guidelines, the provisions of this section shall apply to such activity and any related land disturbing activity on the tract.
- C. Activities for which a permit is required under the North Carolina Mining Act of 1971, codified in Article 7 of Chapter 74 of the North Carolina General Statutes.
- D. For the duration of an emergency, activities essential to protect human life.
- E. Land disturbing activities conducted by the State of North Carolina; by the United States; by persons having the power of eminent domain; by local governments; or which are licensed or bonded, in whole or in part, by the State of North Carolina or the United States; all of which are under the exclusive regulatory jurisdiction of the State of North Carolina.
- F. Those done for the purposes of fighting fires.
- G. The stock-piling of fill dirt, raw or processed sand, stone or gravel in material processing plants and storage yards, provided that sediment control measures have been utilized to protect against off-site damage.
- H. Individual gravesites.
- I. Lawns, gardens and similar horticultural activities.
- J. Activities undertaken on agricultural lands which do not exceed one thousand (1,000) square feet of land disturbance. In determining land disturbance, lands under diverse ownership being developed as a unit shall be aggregated.

12.4.3 General Requirements.

- A. **Plan Required:** No person shall initiate any land-disturbing activity exceeding one thousand (1,000) square feet of land, without first having an approved sedimentation and erosion control plan as set forth in Section 154.088.
- B. **Basic Control Objectives:** The basic control objectives of this section and approved sedimentation and erosion control plans are set forth below.
 1. On-site areas which are subject to severe erosion, and off-site areas which are especially vulnerable to damage from erosion and/or sedimentation, are to be identified and receive special attention.

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2. All land-disturbing activities are to be planned and conducted to limit exposure to the shortest feasible time.
 3. All land-disturbing activities are to be planned and conducted to limit the size of the area to be exposed at any one time.
 4. Surface water runoff originating upgrade of exposed areas should be controlled to reduce erosion and sediment loss during the period of exposure.
 5. All land-disturbing activities shall be planned and conducted so as to prevent off-site sedimentation damage.
 6. When the increase in the velocity of stormwater runoff resulting from a land-disturbing activity is sufficient to cause accelerated erosion of the receiving watercourse, plans must include measures to control the velocity to the point of discharge so as to minimize accelerated erosion of the site and increased sedimentation of the stream.

12.4.4 Mandatory Standards for Land-Disturbing Activity.

No land-disturbing activity subject to the control of this section shall be undertaken except in accordance with the following mandatory standards:

A. Buffer Zone around Water Bodies.

1. No land disturbing activity during periods of construction or improvement to land shall be permitted in proximity to a lake or natural watercourse unless a buffer zone is provided along the margin of the watercourse of sufficient width to confine visible siltation within the twenty-five (25%) percent of the buffer zone nearest the land-disturbing activity.
2. Waters that have been classified as trout waters by the state environmental management commission shall have an undisturbed buffer zone twenty-five (25) feet wide or of sufficient width to confine visible siltation within the twenty-five (25) percent of the buffer zone nearest the land-disturbing activity, whichever is greater. Provided, however, the town may approve plans which include land-disturbing activity along trout waters when the duration of the disturbance would be temporary and the extent of the disturbance would be minimal. This subsection shall not apply to land-disturbing activity in connection with the construction of facilities to be located on, over, or under a lake or natural watercourse.
3. Unless otherwise provided, the width of a buffer zone is measured from the edge of the water to the nearest edge of the disturbed area, with the twenty-five (25) percent of the strip nearer the land-disturbing activity containing natural or artificial means of confining visible siltation.
4. The twenty-five (25) foot minimum width for an undisturbed buffer zoned adjacent to designated trout waters shall be measured horizontally from the top of the bank.
5. When a temporary and minimal disturbance is permitted as an exception, land-disturbing activities in the buffer zone adjacent to designated trout waters shall be limited to a maximum of ten (10) percent of the total length of the buffer zone within the tract to be disturbed such that there is not more than one hundred (100) linear feet of disturbance in each one thousand (1,000) linear feet of buffer zone. Larger areas may be disturbed with written approval of the Administrator.
6. No land-disturbing activity shall be undertaken within a buffer zone adjacent to designated trout waters that will cause adverse temperature fluctuations in these waters, as set forth in 15 NCAC 2B. 0211 "Fresh Surface Water Classification and Standards (available at the North Carolina Division of Environmental Management).

B. Graded Slopes and Fills.

1. The angle for graded slopes and fills shall be no greater than the angle which can be retained by vegetative cover or other adequate erosion control devices or structures, and which can be demonstrated to be stable. Stable is defined as the condition where soil remains in its original configuration, with or without mechanical constraints.
2. In any event, slopes left exposed shall, within thirty (30) working days of completion of any phase of grading, be planted or otherwise provided with ground cover, devices or structures sufficient to restrain erosion.
3. Fill slopes greater than two (2) feet horizontal run to one (1) foot vertical rise (2:1) and higher than five (5) feet above adjacent grade, and cut slopes steeper than one and three-quarters (1.75) feet horizontal run to one (1) foot vertical rise and higher than five (5) feet above adjacent grade, shall be designed by a registered professional and upon completion shall be certified to be stable by a registered professional engineer or landscape architect.
4. All fill slopes shall be compacted full depth to not less than ninety-five (95) percent maximum density (Standard Proctor), shall be placed on a surface cleared of growth and debris, and be properly benched and drained. Such certification shall be required prior to issuance of any certificate of compliance for the site, and shall in any case be submitted within thirty (30) days of the slope reaching final grade.
5. Terracing or slope breaks should be used on steep slopes to reduce the length of cut and fill slopes to prevent erosion and formation of gullies. Benches should be five (5) feet wide, rounded at the edges, and spaced according to the following table:

| Slope | Spacing |
|--------------|------------------|
| 50% (2:1) | 20 Vertical Feet |
| 33% (3:1) | 35 Vertical Feet |
| 25% (4:1) | 45 Vertical Feet |

6. The use of gunite or similar materials is not allowed as a method for slope stabilization.

C. Groundcover.

1. Whenever any land-disturbing activity is undertaken, the person conducting the land-disturbing activity shall install such sedimentation and erosion control devices and practices as are sufficient to retain the sediment generated by the land-disturbing activity within the boundaries of the tract during construction upon and development of the tract, and shall plant or otherwise provide a permanent ground cover sufficient to restrain erosion after the completion of construction or development.
2. Except as provided elsewhere in this section provisions for a ground cover sufficient to restrain erosion must be accomplished within thirty (30) calendar days following completion of construction or development, whichever period is shorter.

D. Grading of Steep Slopes.

1. Grading on residentially zoned property with a slope in excess of fifteen (15) percent shall be limited to disturbing not more than five (5) acres at a time.
2. Any one disturbed area must be brought into final compliance with the requirements of the standards set forth in this section.

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3. For the purposes of this provision, non-contiguous areas located within one thousand five hundred (1,500) feet of each other and owned and/or developed by the same person(s) shall be considered the same project.
- E. **Runoff:** Except as provided for elsewhere in this chapter, erosion and sediment control measures, structures and devices shall be so planned, designed and constructed as to provide protection from the calculated maximum peak rate of runoff from the ten-year storm.
 - F. **Operations on Natural Watercourses.**
 1. Land-disturbing activity in connection with construction in, on, over or under a natural watercourse shall minimize the extent and duration of disruption of the stream channel.
 2. Where relocation of a stream forms an essential part of the proposed activity, the relocation shall minimize unnecessary changes in the stream flow characteristics, except when justification for significant alteration to flow characteristic is provided.
 - G. **Access and Haul Roads:** Temporary access and haul roads, other than public roads, constructed or used in connection with any land-disturbing activity shall be considered a part of such activity.
 - H. **Borrow and Waste Areas.**
 1. When the person conducting the land-disturbing activity is also the person conducting the borrow or waste disposal activity, areas from which borrow is obtained and which are not regulated by the provisions of the North Carolina Mining Act of 1971, and waste areas for surplus materials other than landfills regulated by the North Carolina Department of Environmental, Health and Natural Resources, Division of Solid Waste Management shall be considered as part of the land-disturbing activity where the borrow material is being used or from which the waste material originated.
 2. When the person conducting the land-disturbing activity is not the person obtaining the borrow and/or disposing of the waste, these areas shall be considered a separate land-disturbing activity.
 3. The formal plan shall indicated if there will be borrowed or waste fill material used or deposited, where it originated or where it will be deposited, and what erosion control measures will be used to stabilize it.

12.4.5 Maintenance Requirements.

- A. No land disturbing activity during periods of construction or improvement to land shall be permitted in proximity to a lake or natural watercourse unless a buffer zone is provided along the margin of the watercourse of sufficient width to confine visible siltation within the twenty-five (25%) percent of the buffer zone nearest the land-disturbing activity or 25 feet wide, whichever is greater. During the development of a site, the person conducting the land-disturbing activity shall install and maintain all temporary and permanent erosion and sedimentation control measures as required by the approved plan or any provision of the North Carolina Sedimentation Pollution Control Act, these regulations, or other local ordinances.
- B. After site development, the land owner or persons in possession or control of the land shall install and/or maintain all necessary permanent erosion and sediment control measures, except those measures installed within a road or street right-of-way or easement and which are accepted for maintenance by a governmental agency.
- C. When sediment is transported onto a public road surface, the road shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping and

transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner.

- D. If the town must clean up off-site sedimentation or mitigate other erosion related public safety and environmental hazards, the person in violation will be charged for the cost of the cleanup in addition to the civil penalty that may be charged. The cleanup cost shall include personnel costs, equipment usage, and related administrative overhead. If the violator does not pay for the clean-up cost, revoked permits shall not be reissued and a lien shall be placed on the violator's property until the cost is recouped by the town.

12.5 Stormwater Ordinance.

It is hereby determined that:

- This section shall be officially known as "the stormwater ordinance." It is referred to herein as "this section."
- Development and redevelopment alter 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 which 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.

Therefore, the Town of Waynesville has established this set of water quality and quantity regulations to meet the requirements of state and federal law regarding control of stormwater runoff and discharge.

12.5.1 Purpose.

The purpose of this section 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, as well as illicit discharges into the Town of Waynesville's municipal stormwater systems. 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. These requirements establish stormwater management requirements and controls to prevent surface water quality degradation to the extent practicable in the streams and lakes within the Town Limits and Extraterritorial Jurisdiction of Waynesville. This Section seeks to meet this purpose by fulfilling the following objectives:

- Minimize increases in stormwater runoff from new development or redevelopment to the maximum extent practicable for the applicable design storm in order to reduce flooding, siltation, streambank erosion, increases in stream temperature, and to maintain the integrity of stream channels and aquatic habitats.
- Minimize increases in non-point and point source pollution caused by stormwater runoff from development or redevelopment that would otherwise degrade local water quality. Minimize the total volume of surface water runoff that flows from any specific site during and following development in order to replicate pre development hydrology to the maximum extent practicable through the use of structural and nonstructural stormwater management Best Management Practices (BMPs).

- Establish minimum post development stormwater management standards and design criteria for the regulation and control of stormwater runoff quantity and quality.
- Establish design and review criteria for the construction, function, and use of structural stormwater BMPs (also called stormwater control measures, or SCMs) that may be used to meet the minimum post-development stormwater management standards.
- Ensure that structural and nonstructural stormwater BMPs are properly maintained and pose no threat to public health or safety.
- Establishing 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.
- Control illicit discharges into the municipal separate stormwater system.

12.5.2 Applicability.

- A. **Commencement Date:** Beginning with and subsequent to its effective date, the requirements of this section are applicable to all development and redevelopment located within the Town Limits and Extraterritorial Jurisdiction of Waynesville including, but not limited to, site plan applications, subdivision applications, and grading applications unless exempt pursuant to this section.
- B. **Required Conformity:** No building, structure, or land shall be used, occupied, or altered and no building, structure, or part thereof shall be erected, constructed, reconstructed, moved, enlarged, or structurally altered unless in conformity with all the provisions of this section and all other applicable regulations except as otherwise provided in this Section.
- C. **Minimum Development Thresholds:** The standards in this section shall apply to all new development and redevelopment projects that:
 - a. Cumulatively disturb one (1) acre or more.
 - b. Projects of less than one acre and that are a 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. Projects of less than one acre and that have a proposed increased impervious surface on completion of greater than 24,000 square feet.

All development and redevelopment shall direct stormwater runoff to landscaped areas and other pervious surfaces to the maximum extent possible. All built-upon areas shall be designed and located to minimize stormwater runoff impact to the receiving waters, minimize concentrated stormwater flow, maximize the use of sheet flow through vegetated areas, and maximize the flow length through vegetated areas.

- D. **Illicit Discharges Applicable to All Existing or New Development:** The non-stormwater discharge controls set forth in 12.5.9 of this section shall apply to all existing or proposed developments in the Town of Waynesville's jurisdiction.

12.5.3 Exemptions.

The following development applications are exempt from the standards of this section:

- Single-family and two-family developments on individual lots.
- All development in the Central Business District (CBD) zone.
- Development and redevelopment that cumulatively disturbs less than (1) one acre and is not part of a larger common plan of development or sale unless 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.

- Activities that are exempt from permit requirements of Section 404 of the Federal Clean Water Act as specified in 40 CFR 232 (primarily ongoing farming and forestry activities) are exempt from the provisions of this section.
- Redevelopment that results in no net increase in built-upon area and/or provides equal or greater stormwater control than the previous development is exempt from the provisions of this ordinance.

12.5.4 Administration.

Delegation of Authority: Any act authorized by this ordinance shall be carried out by the Development Services Director and may be carried out by his or her designee as a Stormwater Administrator. For the purpose of this section, the Stormwater Administrator shall mean any Development Services employee designated in this function.

The Administrator shall have the following powers and duties under this section:

- Review, approve, or disapprove applications for approval of plans.
- Make determinations and render interpretations of the requirements of this section.
- Establish application requirements and schedules for submittal and review of applications and appeals and to review and approve applications.
- Enforce the provisions of this section in accordance with its enforcement provisions.
- Make records, maps, and official materials as relate to the adoption, amendment, enforcement, or administration of this section.
- Provide expertise and technical assistance to the Town of Waynesville.
- Carry out the technical duties outlined in this section. The Stormwater Administrator may contract such services to another local government or private entity.
- Designate appropriate other person(s) who shall carry out the powers and duties of the Stormwater Administrator.
- Take necessary actions to administer the provisions of this section.

Map: The Stormwater Map shall be kept on file by the Development Services Department and shall be updated to take into account changes in the land area covered by this ordinance and the geographic location of all structural stormwater control measures permitted under this ordinance. In the event of a dispute, the applicability of this ordinance to a particular area of land shall be determined by reference to the North Carolina Statutes, the North Carolina Administrative Code, and local zoning and jurisdictional boundary ordinances.

Conformance to Stormwater Plans: The latest versions of the Town of Waynesville Stormwater Management Plan and Illicit Discharge Detection and Elimination Plan are herein incorporated by reference. Conformance to them is required in addition to the standards of this ordinance.

Conflict of Laws: This section is not intended to modify or repeal any other ordinance, rule, regulation, or other provision of law. The requirements of this section are in addition to the requirements of any other ordinance, rule, regulation, or other provision of law. Where any provision of this ordinance imposes restrictions different from those imposed by any other ordinance, rule, regulation or other provision of law, whichever provision is more restrictive or imposes higher protective standards for human or environmental health, safety, and welfare shall control.

Other Permits: No certificate of compliance or occupancy shall be issued by the Town of Waynesville Development Services without final as-built plans and a final inspection and approval by the Stormwater Administrator, except where multiple units are served by the stormwater practice or facilities, in which case the Development Services may elect to withhold a percentage of permits or certificates of occupancy until as-built plans are submitted and final inspection and approval have occurred.

12.5.5 Application Procedures and Requirements.

Cross Reference: Permit Procedures: See 15.7.3

Variance: See 15.13

12.5.6 Design Manual.

- A. **Reference to Design Manual:** The Town of Waynesville shall use the policy, criteria, and information, including technical specifications and standards, in the **North Carolina Department of Environmental Quality (NC DEQ) Stormwater Design Manual** as the basis for decisions about stormwater plans and about the design, implementation, and performance of structural and nonstructural stormwater control measures.

The Design Manual includes a list of 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 and other applicable stormwater laws.

- B. **Right to Consult:** Stormwater management practices that are designed, constructed, or maintained in accordance with the Stormwater Design Manual are presumed to comply with these requirements. However, the Stormwater Administrator shall have the right to consult duly qualified professionals to impose any conditions or require any modifications deemed necessary to meet the purpose, intent, and requirements of this section.
- C. **Relationship of Design Manual to Other Laws and Regulations:** If the specifications or guidelines of the Design 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 Design Manual.
- D. **Changes to Standards and Specifications.** If the standards, specifications, guidelines, policies, criteria, or other information in the Design Manual are amended subsequent to the submittal of an application for approval pursuant to this ordinance but prior to approval, then Section 15.16.1- Permit Choice will apply.

12.5.7 Standards.

- A. **General Requirements:**
1. A Stormwater Management System Concept Plan is required for all development and redevelopment projects to which this section applies. This plan shall be prepared by a licensed professional engineer or landscape architect and meet the design specifications of the Town of Waynesville in addition to those standards set forth in this section. See Section 15.7.3 for the specific application process.
 2. The use of natural vegetation and creative landscaping in establishing stormwater control measures is required if applicable. A developer must incorporate the use of natural topography and land cover such as wetlands, ponds, natural swales as they exist prior to development to the degree that they can accommodate the additional flow of water.

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3. Developers are required to use the aforementioned natural measures as well as other BMPs (pervious pavement, discontinuous imperviousness, etc.) in developing property in the town's jurisdiction for the purpose of cleansing and diffusing surface water flow.
 4. Developments shall be designed and constructed with a positive drainage flow away from buildings towards approved stormwater management facilities.
 5. No utilities or habitable structures may be located within any impoundment area of any stormwater management facility. Structures may not be located over a storm drainage line.
 6. All stormwater management facilities will be considered permanent.
 7. No stormwater structure, or part thereof, shall project into the property setbacks as established for each zoning district in section 2.4- Dimensional Standards. If there is no setback or setback is less than 10 ft, then use a minimum distance of 10 feet from the perimeter lot line to a stormwater structure or any part thereof.
 8. **Fencing:** All sections of stormwater structures shall be surrounded with a permanent, continuous fence or vegetation barrier at the top of the embankment with no opening wider than two (2) inches if a stormwater structure contains:
 - a proposed retaining wall higher than 4 feet, and/or
 - a 3:1 slope, and/or
 - a slope height from the toe of the SCM to the crest is greater than 5 feet.
 9. Any stormwater structure with a continuous fence around the entire perimeter shall provide ingress and egress for SCM/pond maintenance but restricted by lockable gates of adequate size to allow for the easy passage of necessary maintenance equipment. **Fences shall be shown on all as-built plans.**
 10. **Signage:** Any SCM that is designed as a pond must have warning signs posted for public visibility and at any major approach to the pond, identifying the area as a stormwater management site to raise public awareness of potential hazards of the site (i.e. no swimming, boating, skating, unsafe to enter, etc.).
 11. **Conversion to Stormwater Management Structure:** After permanent stabilization of all disturbed contributory drainage areas and flushing of the storm drains, temporary sediment basins, if initially built and certified to meet permanent standards, may be converted to permanent stormwater management structures. To convert the basin from temporary to permanent use, the outlet structure must be modified in accordance with approved stormwater management design plans and inspected for watertight connections. Sediment and other debris should be removed to a contained spoil area. Regrading of the basin may be necessary to achieve the final design grades and to provide an adequate topsoil layer to promote final stabilization. **Final elevations and a complete description of any modifications to the riser structure's geometry should be shown on the approved plans.**

B. Water Quality Design Requirements:

1. All Low Density projects and High Density projects must have the built-upon area at a minimum of thirty (30) feet landward of all perennial and intermittent surface waters. This distance shall be measured horizontally from the edge of water. 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). An exception to this requirement may be allowed when site-specific determination is made using NC Division of Water Quality-approved methodology.

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2. In addition to the standards for stormwater management set out in this section, development and redevelopment that drains in whole or part to class TR waters shall design and implement stormwater best management practices that do not result in a sustained increase in the receiving water temperature, while still meeting the other requirements of this section.
 3. The stormwater approval issued shall require recorded deed restrictions and protective covenants to ensure that future development activities maintain the stormwater management measures consistent with the approved project plans.
 4. All Low Density Project sites must employ LID practices to analyze the infiltration capacity and natural drainages of the site and develop a system of controls which mimic the existing natural hydrology and which cumulatively capture and treat the runoff from the 1-year 1-hour storm event. Wherever LID practices are not achievable, or have not been demonstrated, the stormwater management measures shall be designed to control the stormwater runoff according to the requirements of this section.
 5. All High Density projects, for both LID and conventional design approaches, shall include stormwater management measures designed to control the stormwater runoff according to the requirements of this section.

C. Standards for Stormwater Control Measures:

Owners of property subject to this ordinance and required to install structural stormwater control measures shall implement those measures in compliance with each of the following standards:

1. All structural stormwater control measures shall control and treat the runoff from the 1-year 1-hour storm event as determined by NOAA data for the Town of Waynesville.
2. All structural stormwater treatment management measures shall be designed to have an eighty-five (85) percent average annual removal for total suspended solids (TSS).
3. Areas designated as open space that are not or will not be disturbed, developed or redeveloped do not require stormwater runoff treatment.
4. Where any stormwater management treatment measure utilizes a temporary water quality storage pool as a part of its designed treatment system:
 - a. The drawdown time shall be a minimum of 48-hours and a maximum of 120-hours.
 - b. The minimum draw down orifice size shall be 2-inches or equivalent.
 - c. The post development peak flow rates discharged shall not exceed the pre development 1-year 24 hour peak discharge rates.
5. No one BMP shall receive runoff from an area greater than three (3) acres. However, the total drainage area from BMPs used in series (i.e., integrated) can exceed this three (3) acre maximum.
6. Water quality BMPs may encroach into a required buffer as long as the encroachment does not disturb the majority of existing vegetation. Minor understory may be disturbed in order to accommodate water quality structures. Trees and shrubs shall be placed to maximize screening where the encroachment takes place.
7. General engineering for all projects shall be in accordance with 15A NCAC 2H.1008(c).

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8. All stormwater control measures and stormwater treatment practices required under this ordinance shall be evaluated by the Stormwater Administrator according to the policies, criteria, and information, including technical specifications, standards, and the specific design criteria for each stormwater practice, in the Design Manual. The Stormwater Administrator shall determine whether proposed SCMs/BMPs will be adequate to meet the requirements of this ordinance.

D. Water Quantity Design Requirements:

1. For any development to which this section applies, stormwater management facilities, structures, devices and methods shall be designed and built with sufficient capacity to accommodate surface runoff caused by the development in excess of that runoff which would occur from the site if left in its pre development condition.
2. The calculated difference in the peak runoff rate from the post development peak flow rates, less the pre-development shall determine the size of detention structures.
3. The storage shall be sufficient to store all excess surface runoff up to the 10-year 24-hour storm event.
4. The post development peak flow rates discharged from any development that this section applies, shall not exceed the pre development peak discharge rates for the 2-year, 24-hour storm event and the 25-year, 24-hour storm event.
5. The temporary storage capacity shall be restored within 72 hours.
6. The emergency overflow outlet must be designed to safely pass the 50-year, 24-hour storm event peak discharge.
7. Requirements of the Dam Safety Act shall be met when applicable.
8. No one stormwater management facility shall receive runoff from a developed or redeveloped area greater than three (3) acres. However, the total drainage area from BMPs used in series (i.e., integrated) can exceed this three (3) acre maximum.
9. The impoundment of stormwater runoff may be incorporated in the design of stormwater conveyance structures, engineered stormwater BMPs, and ponds. These structures may be located on or off site.
10. In all instances engineered stormwater management facilities and devices shall be designed to complement a development and the surrounding community. If ponds are used, such areas shall be landscaped as amenities or hidden from view.

E. Stormwater Conveyance Systems Design Requirements:

1. Stormwater collection systems (drainage parallel to road, including ditches, swales and pipes) shall be designed to pass the peak flows from the 2-year, 24-hour storm event. The minimum allowable pipe size is 15-inches.
2. Cross drainage systems that do not convey intermittent or perennial streams shall be designed to pass the peak flow rates from the 10-year, 24-hour storm event.
3. Cross drainage systems conveying intermittent or perennial streams, shall be designed pass peak flow rates for the 50-year, 24-hour storm event. These structures shall consist of bottomless single span structures.
4. Inlet capacity and spread calculations must be provided. Roadway inlet locations, capacities, gutter spread, and storm drain pipe system shall be analyzed and designed using a 10-year discharge with a minimum time of concentration of 10 minutes. An intensity of 4

inches/hour should be used for calculating spread and determination of appropriate locations for inlet placement to collect roadway pavement runoff.

5. It is desirable that inlets be designed for 100% interception of runoff, but minor bypass discharge to a downstream inlet is acceptable if it is accounted for in design computations.
6. On grades, the curb opening can be ignored in determining inlet capacity. The grate efficiency may be assumed to equal that of a parallel bar grate.
7. Inlet capacity at sags should allow for debris blockage by providing twice the required computed opening (i.e. assume 50% blockage).
8. Inlet spacing shall be sufficient to limit spread as required for safe vehicle maneuverability. Allowable spread into the travel lane during temporary conditions (detours, phased construction, etc.) should be evaluated based on factors, such as traffic volume, road classification, posted speed limit, and lane width. For curb and gutter sections (with no side parking or bike lanes), the width of the gutter pan is considered the "shoulder."
9. If the design speed is less than or equal 45 mph, then the allowable spread is up to half the travel lane. If the design speed is greater than 45 mph, the allowable spread shall maintain in the shoulder.
10. All storm drain grates shall be perpendicular to the travel way.

F. Uniform Watershed Analysis:

1. Uniform Watershed Analysis is required for all developments. Calculations must be developed to show the development's impact on the greater watershed.
2. The requirements, or portions thereof, for detention may be waived by the Stormwater Administrator if it can be shown by detailed engineering calculations and analysis which are acceptable to the Administrator that one of the following exists:
 - a. The installation of stormwater management facilities would have insignificant effects on reducing downstream flood peak flow rates and water surface elevations.
 - b. Stormwater management facilities are not needed to protect downstream developments and the downstream drainage system has sufficient capacity to receive any increase in runoff for the design storm.
 - c. It is not necessary to install stormwater management facilities to control post development peak discharge rates at the exit to a proposed development and installing such facilities would increase flood peak flow rates and or water surface elevations at some downstream locations.
 - d. The Administrator determines that stormwater management facilities are not needed to control post development peak discharge rates and installing such facilities would not be in the best interest of the Town.
3. The requirements, or portions thereof, of this section may not be waived if the Administrator determines that not controlling peak flow rates would increase known flooding problems, or exceed the capacity of the downstream drainage system.
4. A waiver shall only be granted after a written request is submitted by the applicant containing descriptions, drawings, and any other information that is necessary to evaluate the proposed development or redevelopment. A separate written waiver request shall be required if there are subsequent additions, extensions, or modifications which would alter

the approved stormwater runoff characteristics of the development or redevelopment receiving a waiver.

5. Discharge velocities shall be reduced to provide a non-erosive velocity flow from a structure, channel, or other control measure or the velocity of the 2-year 24-hour design storm runoff in the receiving waterway prior to the development, whichever is greater.
6. For all stormwater management facilities, a hydrologic/hydraulic study shall be conducted showing how the drainage system will function with and without the proposed facilities. For such studies the existing and developed land use conditions shall be used. Existing land use data shall be taken from the most recent aerial photograph and field checked and updated.
7. For the design of the facility outlet structure, use developed land use conditions for the area within the proposed development and existing land use conditions for upstream areas draining to the facility.
8. For any analysis of flood flows downstream from the proposed development, use existing land use conditions for all downstream areas.

12.5.8 Exceptions to the 30-Foot Setback.

Exceptions from the 30-foot landward location of built-upon area requirement of all perennial and intermittent surface waters as well as the deed restrictions and protective covenants requirements shall be granted by the Administrator in any of the following instances:

- A. When there is a lack of practical alternatives for a road crossing, railroad crossing, bridge, airport facility, or utility crossing (including water, sewer, or gas construction and maintenance corridors) as long as it is located, designed, constructed, and maintained to minimize disturbance, provide maximum nutrient removal, protect against erosion and sedimentation, have the least adverse effects on aquatic life and habitat, and protect water quality to the maximum extent practicable through the use of BMPs.
- B. When there is a lack of practical alternatives for a stormwater treatment measures. A lack of practical alternatives may be shown by demonstrating that, considering the potential for a reduction in size, configuration, or density of the proposed activity and all alternative designs, the basic project purpose cannot be practically accomplished in a manner which would avoid or result in less adverse impact to surface waters.
 1. These measures shall be located, designed, constructed, and maintained to minimize disturbance, provide maximum nutrient removal, protect against erosion and sedimentation, have the least adverse effects on aquatic life and habitat, and protect water quality to the maximum extent practicable.
 2. The implementation of the alternative stormwater treatment measures shall not disturb existing vegetation.
 3. Minor understory trees may be disturbed in order to accommodate these measures. Trees and shrubs shall be placed to maximize screening where the encroachment takes place.

12.5.9 Illicit Discharges and Connections.

- A. Illicit Discharges: No person shall cause or allow the discharge, emission, disposal, pouring, or pumping directly or indirectly to any stormwater conveyance, the waters of the State, or upon the land in manner and amount that the substance is likely to reach a stormwater conveyance or the waters of the State unless permitted by an NPDES Permit. Prohibited instances include but are not limited to: anti-freeze, chemicals, animal waste, paints, garbage, and litter. However,

non-stormwater discharges associated with the following activities are allowed provided that they do not significantly impact water quality:

- Dechlorinated swimming pool discharges.
- Landscape irrigation and lawn watering.
- Springs, diverted stream flows, rising ground waters, and flows from riparian habitats and wetlands.
- Filter backwash and draining associated with raw water intake screening and filtering devices.
- Condensate from residential or commercial air conditioning.
- Residential vehicle washing.
- Flushing and hydrostatic testing water associated with utility distribution systems.
- Discharges associated with emergency removal and treatment activities, for hazardous materials, authorized by the federal, state or local government on-scene coordinator.
- Uncontaminated ground water (including the collection or pumping of springs, wells, or rising ground water and ground water generated by well construction or other construction activities).
- Collected infiltrated stormwater from foundation or footing drains.
- Collected ground water and infiltrated stormwater from basement or crawl space pumps.
- Irrigation water.
- Street wash water.
- Flows from fire fighting.
- Discharges from the pumping or draining of natural watercourses or water bodies.
- Flushing and cleaning of stormwater conveyances with unmodified potable water.
- Wash water from the cleaning of the exterior of buildings, including gutters, provided that the discharge does not pose an environmental or health threat.
- Other non-stormwater discharges for which a valid NPDES discharge permit has been authorized and issued by the U.S. Environmental Protection Agency or by the State of North Carolina, provided that any such discharges to the municipal separate storm sewer system shall be authorized by the Town.

B. **Illicit Connections:** Connections to a stormwater conveyance or stormwater conveyance system which allow the discharge of non-stormwater, other than the exclusions described in subsection 12.5.11.A above, are unlawful. Prohibited connections include, but are not limited to: industrial/commercial floor drains, waste water from washing machines or sanitary sewers, wash water from commercial vehicle washing or steam cleaning, and waste water from septic systems.

1. **Prior Illegal Connections To Cease Within One (1) Year:** Where connections exist in violation of this section and said connections were made prior to the adoption of this provision or any other ordinance prohibiting such connections, the property owner or the person using said connection shall remove the connection within one (1) year following application of this regulation.
2. **Hazardous Material Connections to Cease Immediately:** The aforementioned one (1) year grace period shall not apply to connections that result in the discharge of hazardous

material. Nor shall the grace period apply to other discharges which pose an immediate threat to health and safety, or are likely to result in immediate injury and harm to real or personal property, natural resources, wildlife or habitat. For such connections, the Public Works Director shall designate the time within which the connection shall be removed. In setting the time limit for compliance, the director shall take into consideration: the quantity and complexity of the work; the consequences of delay; the potential harm to the environment, public health and to public and private property; and, the cost of remedying the damage.

- C. **Spills:** Spills or leaks of polluting substances released, discharged to, or having the potential to released or discharged to the stormwater conveyance system, shall be contained, controlled, collected, and properly disposed. All affected areas shall be restored to their preexisting condition.

Persons in control of the polluting substances immediately prior to their release or discharge, and persons owning the property on which the substances were released or discharged, shall immediately notify the Town of Waynesville of the release or discharge, as well as making any required notifications under state and federal law. Notification shall not relieve any person of any expenses related to the restoration, loss, damage, or any other liability which may be incurred as a result of said spill or leak, nor shall such notification relieve any person from other liability which may be imposed by State or other law.

12.5.10 Operations and Maintenance Agreement.

- A. **Private Development:** Prior to the conveyance or transfer of any private lot or building site to be served by a structural BMP pursuant to this section and prior to issuance of any permit for development or redevelopment requiring a structural stormwater BMP pursuant to this section, 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 the primary responsibility for carrying out the provisions of the maintenance agreement.
- B. **Public Development:** BMPs that are constructed on public land within public rights-of-way and/ or within public easements shall be maintained by the public body with ownership/ jurisdiction of the subject property.
- C. **Requirements for Homeowners' and Other Associations:**
 - 1. For all structural BMPs required pursuant to this section 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:
 - 2. Acknowledgment that the association shall continuously operate and maintain the stormwater control and management facilities.
 - 3. 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 Stormwater Administrator shall first consent to the expenditure.

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4. Both developer contribution and annual deposits for future use of "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 fifteen percent (15%) of the initial construction cost of the structural BMPs. Two-thirds ($\frac{2}{3}$) 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 to cover the cost of maintenance. 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.
 5. 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 stormwater control and management facility.
 6. Granting to the Town a right of entry to inspect, monitor, maintain, repair, and reconstruct structural BMPs.
 7. Allowing the Town to recover from the association and its member's 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 of its expended costs, after forty-five (45) 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.
 8. A statement that this agreement shall not obligate the Town to maintain or repair any structural BMPs, and that the Town shall not be liable to any person for the condition or operation of structural BMPs.
 9. 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.
 10. A provision indemnifying and holding harmless the Town for any costs and injuries arising from or related to the structural BMP, unless the Town 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.

D. Agreement Requirements:

1. 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 The Town of Waynesville a right of entry in the event that the Stormwater 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 of Waynesville to assume responsibility for the structural BMP.
2. The operation and maintenance agreement must be approved by the Stormwater Administrator prior to plan approval and it shall be referenced on the final plat and shall be recorded with the Haywood County Register of Deeds upon final plat approval. A copy of the recorded maintenance agreement shall be submitted to the Stormwater Administrator following its recordation.

E. **Construction of Stormwater Management Measures:**

1. Stormwater management facilities shall be constructed in accordance with approved plans and maintained in proper working condition. The applicant/ property owner is responsible for ensuring that the construction of drainage structures and stormwater management measures are completed in accordance with the approved plan and specifications.
2. Inspections which may be performed by the Town of Waynesville during construction will not relieve the developer of the responsibility to install stormwater management and drainage facilities in accordance with the approved plan.
3. Revisions which affect the intent of the design or the capacity of the system shall require prior written approval by the Stormwater Administrator.

12.5.11 Inspections.

- A. **Function of BMP as Intended:** The owner of each structural BMP installed pursuant to this section 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.
- B. **Right of Entry for Inspection:**
1. When any new BMP is installed on private property, the property owner shall grant to the Stormwater Administrator the right to enter the property at reasonable times and in a reasonable manner for the purpose of inspection.
 2. Inspections may be conducted by the Stormwater Administrator on any reasonable basis, including but not limited to: routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; inspections of drainage basins or areas identified as higher than typical sources of sediment or other contaminants or pollutants; inspections of businesses or industries of a type associated with higher than usual dischargers of contaminants or pollutants or with discharges of a type which are more likely than the typical discharge to cause violations of State or Federal water quality standards or the NPDES Storm Water Permit; and joint inspections with other agencies inspecting under environmental and 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; evaluating the condition of BMPs and storm water management practices.
 3. If the owner or occupant of any property refuses to permit such inspection, the Stormwater 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 Stormwater Administrator while carrying out his or her official duties.
- C. **Annual Maintenance Inspections and Report:** Inspections shall be conducted as prescribed by the Operations and Maintenance Agreement. The person responsible for maintenance of any structural BMP installed pursuant to this section shall submit to the Stormwater Administrator an inspection report from one of the following persons performing services only in their area of competence: a qualified registered North Carolina professional engineer, landscape architect, soil scientist, aquatic biologist, or person certified by the North Carolina Cooperative Extension Service for stormwater treatment practice inspection and maintenance. The inspection report shall contain all of the following:
1. The name and address of the land owner;
 2. The recorded book and page number of the lot of each structural BMP;

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3. A statement that an inspection was made of all structural BMPs;
 4. The date the inspection was made;
 5. 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 this section; and
 6. Signature and seal of a registered engineer, landscape architect, or person certified by the North Carolina Cooperative Extension Service for stormwater treatment practice inspection and maintenance.
 7. All inspection reports shall be on forms supplied by the Stormwater Administrator. An original inspection report shall be provided to the Stormwater Administrator beginning one year from the date of as-built certification and each year thereafter on or before the date of the as-built.
- D. **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 Stormwater Administrator.
- E. **Nuisance:** The owner of each stormwater BMP, whether structural or non-structural BMP, shall maintain it so as not to create or result in a nuisance condition.

12.5.12 Performance Security.

The Town of Waynesville may, at its discretion, require the submittal of a performance security or bond with surety, cash escrow, letter of credit or other acceptable legal arrangement prior to issuance of a permit in order to ensure that stormwater BMPs are installed as required by the approved stormwater management plan, and are maintained by the owner as required by the operation and maintenance agreement.

- A. **Amount:**
1. The amount of an installation performance security shall be the total estimated construction cost of the BMPs approved under the permit, plus 25%.
 2. The amount of a maintenance performance security shall be the present value of an annuity of perpetual duration based on a reasonable estimate of the annual cost of inspection, operation and maintenance of the BMPs approved under the permit, at a discount rate that reflects the jurisdiction's cost of borrowing minus a reasonable estimate of long-term inflation.
- B. **Forfeiture:** The performance security shall contain forfeiture provisions for failure, after proper notice, to complete work within the time specified, or to initiate or maintain any actions which may be required of the applicant in accordance with this section.
- C. **Default:** Upon default of the applicant to construct, maintain, repair, and if necessary reconstruct any stormwater device in accordance with the applicable permit, the Stormwater Administrator shall obtain and use all or any portion of the security to make necessary improvements based on an engineering estimate. Such expenditure of funds shall only be made after requesting the applicant to comply with the permit. In the event of a default triggering the use of installation of performance security, the Town of Waynesville shall not return any of the unused deposited cash funds or other security, which shall be retained for maintenance.
- D. **Cost in Excess of Performance Security:** If the Town of Waynesville takes action upon such failure by the applicant, the Town may collect the difference should the amount of the reasonable cost

of such action exceed the amount of the security held. This difference will be collected from the applicant.

- E. **Refund:** Within sixty (60) days of the final approval, the installation performance security shall be refunded to the applicant or terminated, except any amount attributable to the cost (plus 25%) of landscaping installation and ongoing maintenance associated with the BMPs covered by the security. Any such landscaping shall be inspected one (1) year after installation with replacement for compliance with the approved plans and specifications and, if in compliance, the portion of the financial security attributable to landscaping shall be released.

12.5.13 Additional Standards for Special Situations.

- A. **Trout Waters:** In addition to the standards for handling stormwater set out in the Design Manual, development and redevelopment that drains in whole or part to class TR waters shall design and implement the best stormwater practices that do not result in a sustained increase in receiving water temperature, while still meeting the other requirements of this ordinance.
- B. **Pet Waste:** Pet waste can pollute rivers, streams, and lakes. Stormwater runoff carries pet waste into drainage ditches and storm drains where it is then dumped, untreated, into the nearest waterway. Dog waste contains bacteria, viruses, and parasites that can harm humans and affect water quality. Once in a waterway, pet waste can travel long distances and pollute a large area. Therefore:
- It shall be unlawful for the owner or custodian of any dog to take it off the owner's own property limits without the means to properly remove and dispose of the dog's feces from any public or private property.
 - It is the responsibility of a dog's owner or custodian to clean up the dog's feces from any public or private property outside of the dog's owner's own property limits. Such property includes, but is not limited to, parks, rights-of-way, paths, and public access areas.
 - "Means to properly remove and dispose of feces" shall consist of having on or near one's person a device such as a plastic bag, or other suitable plastic or paper container, that can be used to clean up and contain dog waste until it can be disposed of in an appropriate container.
 - This provision shall not apply to handicapped persons assisted by trained guide or assistance dogs.

12.5.14 Interpretation.

- A. **Meaning and Intent:** All provisions, terms, phrases, and expressions contained in this ordinance shall be construed according to the general and specific purposes set forth in section 12.5.1, Purpose. If a different or more specific meaning is given for a term defined elsewhere in the Town of Waynesville Code of Ordinances, the meaning and application of the term in this ordinance shall control for purposes of application of this ordinance.
- B. **Text Controls in Event of Conflict:** In the event of a conflict or inconsistency between the text of this ordinance and any heading, caption, figure, illustration, table, or map, the text shall control.
- C. **Authority for Interpretation:** The Stormwater Administrator or a Development Services employee designated to carry out the duties of a Stormwater Administrator has authority to determine the interpretation of this ordinance. Any person may request an interpretation by submitting a written request to the Stormwater Administrator, who shall respond in writing within 30 days. The stormwater administrator shall keep on file a record of all written interpretations of this ordinance.

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- D. **References to Statutes, Regulations, and Documents:** Whenever reference is made to a resolution, ordinance, statute, regulation, manual (including the Design Manual), or document, it shall be construed as a reference to the most recent edition of such that has been finalized and published with due provision for notice and comment, unless otherwise specifically stated.
- E. **Computation of Time:** The time in which an act is to be done shall be computed by excluding the first day and including the last day. If a deadline or required date of action falls on a Saturday, Sunday, or holiday observed by the Town of Waynesville, the deadline or required date of action shall be the next day that is not a Saturday, Sunday or holiday observed by the Town of Waynesville. References to days are calendar days unless otherwise stated.

12.6 Hillside Protection.

12.6.1 Purpose.

The purpose of this section is to regulate development in steep slope areas in order to preserve the Town of Waynesville's unique character, conserve the public health, safety and general welfare and to promote environmentally sound design and planning in accordance with the following objectives:

- To protect life and property from all potentially hazardous conditions particular to steep slopes, e.g., rock falls, flash flooding, debris flows, mud slides and increased wildfire hazard.
- To preserve and enhance the scenic and environmental resources of the landscape by encouraging the maximum retention of prominent natural topographic features, i.e., drainage swales, streams, slopes, ridgelines, rock outcroppings, vistas, natural plant formations, and trees.
- To encourage innovative site and architectural design and planning in order for the development to adapt to the natural terrain and be harmonious with the character of the area.
- To minimize grading and cut and fill operations inconsistent with the retention of the natural character of the hillside.
- To preserve where possible, natural streams, ponds and associated riparian vegetation.
- To require the retention of trees and other vegetation to stabilize steep hillsides, retain moisture, prevent erosion and enhance the natural scenic beauty.
- To encourage the retention of trees and other vegetation throughout the site instead of just the periphery of the development.
- To encourage minimal grading which relates to the natural contour of the land, thus rounding off sharp angles at the top and bottom of cut and fill slopes in a natural manner.
- To provide land use densities to promote the best possible development of hillside areas in order to retain significant natural features and to preserve slope stability.
- To encourage road design that follows the natural topography wherever possible in order to minimize grading.
- To preserve predominant views from and of the hillside areas in order to retain the sense of identity and imagery that the hills and mountains now impart to the Town of Waynesville.

12.6.2 Applicability.

- A. For the purposes of this section, a Steep Slope Area is defined as any lot, parcel, tract or portion thereof, that has a natural elevation of 2,900 feet above mean sea level or higher, with a natural average slope of 25% or greater as determined using the following formula:

$$S = 0.0023 \times I \times L / A$$

Where:

S= Average natural slope of parcel in percent

I= Contour interval of map in feet

L= Total length of contour lines within the parcel in feet

A= Area in acres of the parcel

0.0023= Constant which converts square feet into acres.

- B. In the case of conflict between the average natural slope determination of a lot using different methods of calculation the following methods shall prevail in the following order: 1) use of the above formula based on field survey data, 2) use of the above formula based on the best available topographic data in the Haywood County Geographic Information system, 3) use of a Town approved geographic information system based slope calculation tool.
- C. Application to properties with an average natural slope of 25% or greater split by the 2,900-foot contour line.
 - 1. If any portion of the lot above 2,900 feet is placed in a permanent conservation easement or otherwise reserved in perpetuity, the residential density from this portion of the property may be transferred to the remainder of the property below 2,900 feet or to adjacent properties in the same ownership below 2,900 feet at the same ratio as that of the underlying zoning district.
 - 2. The area above 2,900 feet may be developed as provided for in Table 12.6.4, and the remainder of the property below 2,900 feet or with an average slope below 25% may be developed as permitted in the underlying zoning district.
- D. Reservation of steep slope areas to reduce average slope. Areas placed in a permanent conservation easement, dedicated to the public for open space, protected as open space by restrictive covenants or otherwise permanently protected in a natural state with a prohibition on vegetation removal and land disturbing activity may be excluded from the calculation of the average slope for the property or properties which include the area, provided that the minimum size of each such reserved area shall equal the minimum lot size for the underlying zoning district.

12.6.3 General Steep Slope Area Development Standards.

- A. No land disturbing activity shall take place until full development approval has been received.
- B. Land disturbing activity shall be limited to designated building envelopes and approved road and driveway corridors as shown on approved site plans.
- C. Diversion or channelization of perennial streams shall not be permitted unless without such diversion or channelization a tract existing at the time of adoption of this amendment is rendered unusable for any of the principal uses allowed within the zoning district.
- D. The riparian stream buffers shall be left intact, which means that removal of trees, or other vegetation, or disturbance of soils within this buffer is prohibited, except for necessary road crossings. The buffers shall be a minimum of 30' from the edge of the stream or 25 feet from the top of bank, whichever is greater.
- E. Perennial streams shall not be placed in culverts except to the minimum extent possible for necessary road crossings.

- F. Developers shall make reasonable efforts to preserve and protect existing natural features of the slope, such as trees and other plan material, and rock outcroppings which may help to stabilize the slope.
- G. The maximum area of disturbance per phase shall not exceed 5 acres.
- H. Cut and fill slopes shall comply with the standards of Section 12.4.
- I. Stormwater management shall comply with the standards of Section 12.5.

12.6.4 Specific Steep Slope Area Development Standards.

In addition to any development restriction imposed by the underlying zoning district, the following standards shall apply to any properties that are subject to the standards of this section:

Table 12.6.4

| Average slope | 25-29% | 30-34% | 35-39% | 40-44% | 45-49% | 50% + |
|--|---------------------------------|---------------------------------|---------------|---------------|---------------|--------------|
| Maximum Density/Minimum Lot Size (acres/du) | 25% reduction underlying zoning | 50% reduction underlying zoning | 4 acres/du | 5 acres/du | 7.5 acres/du | 10 acres/du |
| Maximum disturbed area (% of site) | 35% | 30% | 25% | 20% | 15% | 10% |
| Maximum impervious area (% of site) | 30% | 25% | 20% | 15% | 10% | 10% |
| Minimum riparian buffer (width in feet from edge of stream - See 12.6.3.D) | 25/30 ft. | 25/30 ft. | 25/30 ft. | 25/30 ft. | 25/30 ft. | 25/30 ft. |

12.6.5 Plan Requirements.

In addition to the submittal requirements of the underlying zoning district and Chapter 15, the following plans/reports shall be required prior to approval of Steep Slope Area development or land subdivision:

- A. **Residential Development with 4 or Fewer Units:** Scale site plan showing:
 1. Project boundaries.
 2. Topography with contour lines from a field survey or Haywood County GIS with a five (5) foot contour interval.
 3. Existing structures, utility lines, roads, driveways, wells, septic systems and other site improvements.
 4. Proposed structures, utility lines, driveways, wells, septic systems and other site improvements.
 5. Proposed extent of disturbed areas.
 6. Existing and proposed forested areas.
 7. Perennial and intermittent streams from the Soil Survey of Haywood County.
 8. If individual wells and/or septic tanks are to be utilized, a written statement from the Haywood County Health Department indicating approval of wells and/or septic tanks for use in the development.

B. Non-Residential Development and Residential Development with 5 or More Units:

1. Site plan with information listed in A above.
2. Site aerial from Haywood County GIS.
3. Slope map showing slopes in 5% increments corresponding to Table 12.6.4.
4. Map to illustrate project context and connectivity beyond property boundaries.
5. Hydrology floodplains, floodways, streams, springs, wetlands, seeps and drainages.
6. Site specific geologic analysis of the Steep Slope Area to be developed, prepared by a North Carolina licensed geologist, soil scientist, geotechnical engineer or other qualified professional, to determine whether that plan can be developed on the site without jeopardizing slope stability on the site itself or on properties surrounding the site.

(Ord. No. O-01-15 , § 9, 1-27-2015)

12.7 Mountain Ridge Protection.

12.7.1 Required Standards.

Pursuant to the Mountain Ridge Protection Act of 1983:

- A. No person may construct a Tall Building or Structure on any Protected Mountain Ridge as defined by G.S. 130A-334.
- B. None of the following utility services shall be extended to any building or structure constructed in violation of subsection A above: electricity, telephone, gas, water, sewer or septic system.
- C. Applications for development on Protected Mountain Ridges, shall, in addition to the submittal requirements of the underlying zoning district, Section 12.6 (if applicable) and Chapter 15, submit the following:
 1. Cross sectional profiles of all principal buildings as proposed to be sited on the property and the property showing existing and the proposed post-grading profile drawn perpendicular to the direction of the slope.
 2. If individual wells and/or septic tanks are to be utilized, a written statement from Haywood County Health Department indicating approval of wells and/or septic tanks for use in the development.
 3. Documentation of an approved Sedimentation and Erosion Control Plan.
 4. A letter or approval from the fire department with jurisdiction indicating the adequacy of the development facilities for emergency medical and fire services. Such determination shall take into consideration the street access, water pressure and availability, building height, and any other relevant factors.
- D. All applications for development on Protected Mountain Ridges shall be approved by the Planning Board only after finding that the proposed development has given adequate consideration to protecting the natural beauty of the mountains by making the following findings:
 1. The development plan preserves natural vegetation and scenic features such as outcroppings to the maximum extent possible.

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2. The development plan sites the proposed development in a way to minimize its visual impact and land disturbance.
 3. The development plans use architectural design, colors and materials that blend well with or are compatible with the natural beauty of the Protected Mountain Ridge.
 4. The development plan minimizes land disturbing activities including the area disturbed and the height of cut and fill slopes to the maximum extent practical.

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