

ARTICLE 10 – ENVIRONMENTAL PROTECTION

10.01 WATERSHED PROTECTION

A. AUTHORITY AND ENFORCEMENT.

The North Carolina General Assembly has by G.S. § 143.211 Declaration of Public Policy stated that it is declared to be the public policy of this State to provide for the conservation of its water and air resources and has by G.S. § 143-214.5 Water Supply Watershed Protection delegated the responsibility for water supply watershed management and protection to be administered by local governments and has by G.S. § 143-214.5 directed local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. The City Council of the City of Eden pursuant to the provisions herein referenced as well as G.S. § 143-211 and G.S. § 143-214.5, G.S. §160D-702 and G.S. § 143-801, G.S. § 160A-174-185, and G.S. § 143-193, does hereby ordain and enact into law the following Sections as the Watershed Protection Section of the City of Eden.

B. JURISDICTION.

The provisions of this Section shall apply within the areas designated as a Public Water Supply Watershed by the N.C. Environmental Management Commission (a division of NCDEQ) and shall be defined and established on the map entitled, "Watershed Protection Map of the City of Eden, North Carolina" ("the Watershed Map"), which is adopted simultaneously herewith as part of the City's official zoning map. The Watershed Map and all explanatory matter contained thereon accompanies and is hereby made a part of this Section. This Section shall be permanently kept on file in the office of the City Clerk.

1. Exceptions to Applicability.

- a. Nothing contained herein shall repeal, modify, or amend any Federal or State law or regulation, nor shall any provision of this Section amend, modify, or restrict any provisions of the Code of Ordinances of the City of Eden.
- b. It is not intended that these regulations interfere with any easement, covenants or other agreements between parties. However, if the provisions of these regulations impose greater restrictions or higher standards for the use of a building or land, then the provisions of these regulations shall control.
- c. Existing development, as defined in *Section 14 - Definitions*, is not subject to the requirements of this Section. Expansions to structures classified as existing development must meet the requirements of this Section, however, the built-upon area of the existing development is not required to be included in the density calculations.
- d. A pre-existing lot owned by an individual prior to the effective date of this Section, regardless of whether or not a vested right has been established, may be developed for single family residential purposes without being subject to the restrictions of this Section. However, this exemption is not applicable to multiple contiguous lots under single ownership.

C. CRIMINAL PENALTIES.

Any person violating any provisions of this Section shall be guilty of a misdemeanor and, upon conviction, shall be punished in accordance with G.S. § 14-4. The maximum fine for each offense shall not exceed \$500.00. Each day that the violation continues shall constitute a separate offense.

D. REMEDIES.

1. If any development and/or land use is found to be in violation of this Section, the City Council may, in addition to all other remedies available either in law or in equity, institute a civil penalty in the amount of \$500.00, action or proceedings to restrain, correct, or abate the violation; to prevent occupancy of the building, structure, or land; or to prevent any illegal act, conduct, business, or use in or about the premises. In addition, the N.C. Environmental Management Commission may assess civil penalties in accordance with G. S. § 143-215.6(a). Each day that the violation continues shall constitute a separate offense.
2. If the Administrator finds that any of the provisions of this Section are being violated, he shall notify in writing the person responsible for such violation, indicating the nature of the violation, and ordering the action necessary to correct it. He shall order discontinuance of the illegal use of land, buildings or structures; removal of illegal buildings or structures, or of additions, alterations or structural changes thereto; discontinuance of any illegal work being done; or shall take action authorized by this Section to ensure compliance with or to prevent violation of its provisions. If a ruling of the Administrator is questioned, the aggrieved party or parties may appeal such ruling to the Board of Adjustment.

E. SEVERABILITY.

Should any section or provision of this Section be declared invalid or unconstitutional by any court of competent jurisdiction, the declaration shall not affect the validity of this Section as a whole or any part thereof that is not specifically declared to be invalid or unconstitutional.

F. EFFECTIVE DATE.

This Section shall take effect and be in force on July 1, 1993.

G. SUBDIVISION REGULATIONS

1. See *Article 8 – Subdivision and Infrastructure Standards*.
2. Certificate of Approval for Recording. If the Administrator approves a subdivision plat, the following certificate shall be provided on all recorded plats:

Certificate of Approval for Recording

I certify that the plat shown hereon complies with the Watershed Protection Standards of the Eden Unified Development Ordinance and is approved by the Administrator for recording in the Rockingham County Register of Deeds office.

Administrator

Date

NOTICE: This property is located within a Public Water Supply Watershed. Development restrictions may apply.

3. Subdivision standards and requirement improvements.
 - a. All lots shall provide adequate building space in accordance with the development standards contained in *Article 4 – Zoning Districts*.
 - b. Lots which are smaller than the minimum required for residential lots shall be identified on the final plat as "NOT FOR RESIDENTIAL PURPOSES."
 - c. For the purpose of calculating built-upon area, total project area shall include acreage in the tract on which the project is to be developed.
 - d. Storm Water Drainage Facilities. The application shall be accompanied by a description of the proposed method of providing storm water drainage. The subdivider shall provide a drainage system that diverts stormwater runoff away from surface waters and incorporate Best Management Practices to minimize water quality impacts.
 - e. Erosion and Sedimentation Control. The application shall, where required, be accompanied by a written statement that a Sedimentation and Erosion Control Plan has been submitted to and approved by the N.C. Division of Land Quality.
 - f. Roads constructed in critical areas and watershed buffer areas. Where possible, roads should be located outside of critical areas and watershed buffer areas. Roads constructed within these areas shall be designed and constructed so to minimize their impact on water quality.
4. Construction Procedures.
 - a. No construction or installation of improvements shall commence in a proposed subdivision until a subdivision plat has been approved by the Administrator.
 - b. No building or other permits shall be issued for erection of a structure on any lot not of record at the time of adoption of this Section until all requirements of this Section have been met. The subdivider, prior to commencing any work within the subdivision, shall make arrangements with the Administrator to provide for adequate inspection.
5. Penalties for Transferring Lots in Unapproved Subdivisions.
 - a. See *Article 8 – Subdivision and Infrastructure Standards*.

H. DEVELOPMENT REGULATIONS.

1. Establishment of Watershed Areas.

- a. The purpose of this Section is to list and describe the watershed areas herein adopted.
- b. For purposes of this Section the City of Eden is hereby divided into the following areas, as appropriate:
 - (1) WS-IV-CA (Critical Area)
 - (2) WS-IV-PA (Protected Area)
- c. **WS-IV Watershed Areas - Critical Area (WS-IV-CA).** Only new development activities that require an erosion/sedimentation control plan under State law or approved local program are required to meet the provisions of this Section when located in the WS-IV watershed. In order to address a moderate to high land use intensity pattern, single-family residential uses are allowed at a maximum of two (2) dwelling units per acre. All other residential and non-residential development shall be allowed twenty-four percent (24%) built-upon area.
 - (1) Prohibited Uses:
 - (a) Flammable and combustible liquid and gas storage and distribution facilities; residential and commercial sales and distribution; and bulk and wholesale storage and distribution.
 - (b) Junkyards and motor vehicle wrecking yards.
 - (c) Land application of sludge residuals or petroleum contaminated soils.
 - (d) Landfills, demolition and sanitary.
 - (e) Manufacture of: chemicals and allied products; food, beverages and kindred products; primary metal products; rubber products; plastic products; and, concrete products.
 - (f) Mining and quarrying activities.
 - (g) Motor freight transportation (truck) terminals.
 - (h) Motor vehicle related operations: gasoline and fuel sales operation; and, repair, service and maintenance operations.
 - (i) Storage and/or manufacture of hazardous materials, toxic substances and the storage and/or treatment of waste from hazardous materials and toxic substances.
 - (2) Allowed Uses:
 - (a) Agriculture subject to the provisions of the Food Security Act of 1985 and the Food, Agriculture, Conservation and Trade Act of 1990. Agricultural activities conducted after January 1, 1994 shall maintain a minimum ten (10) foot vegetative buffer, or equivalent control as determined by the Soil and Water Conservation Commission, along all perennial waters indicated on the most recent versions of U.S.G.S. 1:24,000 (7.5 minute) scale topographic map or as determined by local government studies. Animal operations greater than 100 animal units shall employ Best Management Practices by July 1, 1994 recommended by the Soil and Water Conservation Commission.
 - (b) Silviculture, subject to the provisions of the Forest Practices Guidelines Related to Water Quality (15 NCAC 11.6101-.0209).

- (c) Residential uses.
 - (d) Non-residential development, excluding: 1) the storage of toxic and hazardous materials unless a spill containment plan is implemented, 2) landfills and 3) sites for land application of sludge/residuals or petroleum contaminated soils.
- (3) Density and Built-upon Limits:
- (a) Single-Family Residential--development shall not exceed two (2) dwelling units per acre on a project by project basis. No residential lot shall be less than one-half (1/2) acre, except within an approved cluster development.
 - (b) All Other Residential and Non-Residential--development shall not exceed twenty-four percent (24%) built-upon area on a project by project basis. For the purpose of calculating the built-upon area; total project area shall include total acreage in the tract on which the project is to be developed.
- d. **WS-IV Watershed Areas - Protected Area (WS-IV-PA).** Only new development activities that require an erosion/sedimentation control plan under State law or approved local government program are required to meet the provisions of this Section when located in a WS-IV watershed. In order to address a moderate to high land use intensity pattern, single-family residential uses shall develop at a maximum of two (2) dwelling units per acre. All other residential and non-residential development shall be allowed at a maximum of twenty-four percent (24%) built-upon area. A maximum of three (3) dwelling units per acre or thirty-six percent (36%) built-upon area is allowed for projects without a curb and gutter street system.
- (1) Prohibited Uses:
- (a) Sanitary landfills (demolition landfills are allowed subject to approval of North Carolina Division of Solid Waste Management).
 - (b) Mining and quarrying activities.
 - (c) Manufacture of hazardous materials, toxic substances and the storage and/or treatment of waste from hazardous materials and toxic substances.
- (2) Uses Allowed:
- (a) Agriculture, subject to the provisions of the Food Security Act of 1985 and the Food Agricultural, Conservation and Trade Act of 1990.
 - (b) Silviculture, subject to the provisions of the Forest Practices Guidelines Related to Water Quality (15 NCAC 1r.6101-.0209).
 - (c) Residential development.
 - (d) Non-residential development, excluding the storage of toxic and hazardous materials unless a spill containment plan is implemented.
- (3) Density and Built-upon Limits:
- (a) Single-Family Residential--development shall not exceed two (2) dwelling units per acre, as defined on a project by project basis. No residential lot shall be less than one-half (1/2) acre,

or one-third (1/3) acre for projects without a curb and gutter system, except within an approved cluster development.

- (b) All Other Residential and Non-Residential--development shall not exceed twenty-four percent (24%) built-upon area on a project by project basis. For projects without a curb and gutter street system, development shall not exceed thirty-six percent (36%) built-upon area on a project by project basis. For the purpose of calculating built-upon area, total project area shall include acreage in the tract on which the project is to be developed.
- (c) In addition to the development allowed under paragraphs (a) and (b) above, new development and expansions may occupy up to ten percent (10%) of the protected area with up to seventy percent (70%) built-upon area on a project by project basis subject to the provisions below. To the maximum extent practicable, projects must minimize built-upon surface area, direct stormwater away from surface waters and incorporate Best Management Practices to minimize water quality impacts. For the purpose of calculating built-upon area, total project area shall include total acreage in the tract on which the project is to be developed. This shall hereafter be referred to as the 10/70 provision.
- (d) Only non-residential projects within the protected area (PA) of either the Smith or Dan River watersheds under the jurisdiction of the City of Eden may qualify. There shall be no transfer between the Smith and Dan River Watersheds.
- (e) Developments using this option shall provide an engineer's certification of runoff control for control of the first one inch (1") of runoff from all built upon area.
- (f) No project that does not have access to public sewer shall qualify for the 10/70 provision. Approval may be granted subject to connection to public sewer provided such connection is made within one (1) year from the date the approval is granted. When a building permit for the site is issued or the subdivision plat for a development is recorded, an allocation shall be assigned. Expiration of a building permit shall terminate the allocation. If in the case of a subdivision plat a building permit is not issued within one (1) year from the date of recording the allocation shall be terminated. In all cases unless construction has been initiated and is proceeding the allocation shall be terminated after one (1) year.
- (g) Allocation shall be made by the City Council upon recommendation from the Watershed Administrator and the Planning Board. Each project shall be considered on its own merit based upon its impact to the local economy, its impact to the City's water reclamation program, the potential level of hazard to the water supply, soil conditions, drainage ways, slope, undisturbed areas, proximity to waterways, and whether it is an expansion of an existing development or a new development. New development shall receive a higher priority than expansions of existing development. The City Council may consider any other factors that it deems relevant in its decision making.
- (h) No existing use that is prohibited by this Section or is non-conforming to any other City of Eden land use regulation shall be allowed to expand using the 10/70 provision.

e. Cluster Development.

- (1) Minimum lot sizes are not applicable to single family cluster development projects; however, the total number of lots shall not exceed the number of lots allowed for single-family detached developments in this Section. Built-upon area or stormwater control requirements of the project shall not exceed that allowed for the critical area or balance of watershed, whichever applies.
- (2) All built-upon area shall be designed and located to minimize stormwater runoff impact to the receiving waters and minimize concentrated stormwater flow.
- (3) The remainder of the tract shall remain in a vegetated or natural state. Where the development has an incorporated property owners association, the title of the open space area shall be conveyed to the association for management. Where a property association is not incorporated, a maintenance agreement shall be filed with the property deeds.

f. Buffer Area Required.

- (1) A minimum one hundred (100) foot vegetative buffer is required for all new development activities that exceed the low density option; otherwise, a minimum thirty (30) foot vegetative buffer for development activities is required along all perennial waters indicated on the most recent versions of U.S.G.S. 1:24,000 (7.5 minute) scale topographic maps or as determined by local government studies. Desirable artificial streambank or shoreline stabilization is permitted.
- (2) No new development is allowed in the buffer except for water dependent structures and public projects such as road crossings and greenways where no practical alternative exists. These activities should minimize built-upon surface area, direct runoff away from the surface waters and maximize the utilization of stormwater Best Management Practices.

g. Rules Governing the Interpretation of Watershed Area Boundaries.

- (1) Where uncertainty exists as to the boundaries of the watershed areas, as shown on the Watershed Map, the following rules shall apply:
 - (a) Where area boundaries are indicated as approximately following either street, alley, railroad or highway lines or centerlines thereof, such lines shall be construed to be said boundaries.
 - (b) Where area boundaries are indicated as approximately following lot line, such lot lines shall be construed to be said boundaries. However, a surveyed plat prepared by a registered land surveyor may be submitted to the City of Eden as evidence that one or more properties along these boundaries do not lie within the watershed area.
 - (c) Where the watershed area boundaries lie at scaled distance more than twenty-five (25) feet from any parallel lot line, the location of watershed area boundaries shall be determined by **use of the scale appearing on the Watershed Map.**
 - (d) Where the watershed area boundaries lie at a scaled distance of twenty-five (25) feet or less from any parallel lot line, the location of watershed area boundaries shall be construed to be the lot line.
 - (e) Where other uncertainty exists, the Watershed Administrator shall interpret the Watershed Map as to location of such boundaries. This decision may be appealed to the Board of Adjustment.

h. Application of Regulations.

- (1) No building or land shall hereafter be used and no development shall take place except in conformity with the regulations herein specified for the watershed area in which it is located.
- (2) No area required for the purpose of complying with the provisions of this Section shall be included in the area required for another building.
- (3) Every residential building hereafter erected, moved or structurally altered shall be located on a lot which conforms to the regulations herein specified, except as permitted in Section 6.
- (4) If a use or class of use is not specifically indicated as being allowed in a watershed area, such use or class of use is prohibited.

i. Existing Development.

- (1) Any existing development as defined in *Article 14 - Definitions* may be continued and maintained subject to the provisions provided herein. Expansions to structures classified as existing development must meet the requirements of this Section; however, the built-upon area of the existing development is not required to be included in the density calculations.

j. Vacant Lots.

This category consists of vacant lots for which plats or deeds have been recorded in the office of the Rockingham County Register of Deeds at Rockingham County. Lots may be used for any of the uses allowed in the watershed area in which it is located, provided the following:

- (1) Where the lot area is below the minimum specified in this Section the watershed Administrator is authorized to issue a watershed protection permit.
- (2) Notwithstanding the foregoing, whenever two or more contiguous residential vacant lots of record are in single ownership at any time after the adoption of this Section and such lots individually have less area than the minimum requirements for residential purposes for the watershed area in which such lots are located, such lots shall be combined to create one or more lots that meet the standards of this Section, or if this is impossible, reduce to the extent possible the nonconformity of the lots.

k. Occupied Lots.

This category consists of lots, occupied for residential purposes at the time of the adoption of this Section. These lots may continue to be used provided that whenever two or more adjoining lots of record, one of which is occupied, are in single ownership at any time after the adoption of this Section, and such lots individually or together have less area than the minimum requirements for residential purposes for the watershed area in which they are located, such lots shall be combined to create lots which meet the minimum size requirements or which minimize the degree of nonconformity.

l. Uses of Land.

This category consists of uses existing at the time of adoption of this Section where such use of land is not permitted to be established hereafter in the watershed area in which it is located. Such uses may be continued except as follows:

- (1) When such use of land has been changed to an allowed use, it shall not thereafter revert to any prohibited use.
- (2) Such use of land shall be changed only to an allowed use.
- (3) When such use ceases for a period of at least one year, it shall not be reestablished.

m. Reconstruction of Buildings or Built-upon Areas.

Any existing building or built-upon area not in conformance with the restrictions of this Section that has been damaged or removed may be repaired and/or reconstructed, except that there are no restrictions on single-family residential development, provided:

- (1) Repair or reconstruction is initiated within twelve (12) months and completed within two (2) years of such damage.
- (2) The total amount of space devoted to built-upon area may not be increased unless stormwater control that equals or exceeds the previous development is provided.

I. WATERSHED PROTECTION PERMIT.

1. Except where a single-family dwelling is constructed on a lot deeded prior to the effective date of this Section, no building or built-upon area shall be erected, moved, enlarged or structurally altered, nor shall any building permit be issued nor shall any change in the use of any building or land be made until a Watershed Protection Permit has been issued by the Administrator. No Watershed Protection Permit shall be issued except in conformity with the provisions of this Section.
2. Watershed Protection Permit applications shall be filed with the Administrator. The application shall include a completed application form and supporting documentation deemed necessary by the Administrator.
3. Prior to issuance of a Watershed Protection Permit, the Administrator may consult with qualified personnel for assistance to determine if the application meets the requirements of this Section.
4. A Watershed Protection Permit shall expire if a Building Permit or Watershed Protection Occupancy Permit for such use is not obtained by the applicant within twelve (12) months from the date of issuance.

J. BUILDING PERMIT REQUIRED.

1. Except for a single family residence constructed on a lot deeded prior to July 1, 1993, no permit required under the North Carolina State Building Code shall be issued for any activity for which a Watershed Protection Permit is required until that permit has been issued.

K. WATERSHED PROTECTION OCCUPANCY PERMIT.

1. The Administrator shall issue a Watershed Protection Occupancy Permit certifying that all requirements of this Section have been met prior to the occupancy or use of a building hereafter erected, altered or moved and/or prior to the change of use of any building or land.
2. A Watershed Protection Occupancy Permit, either for the whole or part of a building, shall be applied for coincident with the application for a Watershed Protection Permit and shall be issued or denied within ten (10) days after the erection or structural alterations of the building.

3. When only a change in use of land or existing building occurs, the Administrator shall issue a Watershed Protection Occupancy Permit certifying that all requirements of this Section have been met coincident with the Watershed Protection Permit.
4. If the Watershed Protection Occupancy Permit is denied, the Administrator shall notify the applicant in writing stating the reasons for denial.
5. No building or structure which has been erected, moved, or structurally altered may be occupied until the Administrator has approved and issued a Watershed Protection Occupancy Permit.

L. PUBLIC HEALTH REGULATIONS

1. Public Health.

No activity, situation, structure or land use shall be allowed within the watershed which poses a threat to water quality and the public health, safety and welfare. Such conditions may arise from inadequate on-site sewage systems which utilize ground absorption; inadequate sedimentation and erosion control measures; the improper storage or disposal of junk, trash or other refuse within a buffer area; the absence or improper implementation of a spill containment plan for toxic and hazardous materials; the improper management of stormwater runoff; or any other situation found to pose a threat to water quality.

2. Abatement.

- a. The Administrator shall monitor land use activities within the watershed areas to identify situations that may pose a threat to water quality.
- b. The Administrator shall report all findings to the Board of Adjustment. The Administrator may consult with any public agency or official and request recommendations.
- c. Where the Board of Adjustment finds a threat to water quality and the public health, safety and welfare, the Board shall institute any appropriate action or proceeding to restrain, correct or abate the condition and/or violation.

M. ADMINISTRATION, ENFORCEMENT AND APPEALS.

1. Watershed Administrator and Duties.

The City of Eden shall appoint a Watershed Administrator (also see – Administrator in *Section 2 - Administration*), who shall be duly sworn in. It shall be the duty of the Watershed Administrator to administer and enforce the provisions of this Section as follows:

- a. The Watershed Administrator or his duly authorized representative shall issue Watershed Protection Permits and Watershed Occupancy Permits as prescribed herein. A record of all permits shall be kept on file and shall be available for public inspection during regular office hours of the Administrator.
- b. The Watershed Administrator shall serve as Administrative Assistant to the Board of Adjustment.
- c. The Watershed Administrator shall be responsible for keeping records of all amendments to the local Water Supply Watershed Protection Section and shall provide copies of all amendments upon adoption to the Water Quality Section of the Division of Water Quality.

- d. The Watershed Administrator shall keep records of the jurisdiction's use of the provision that a maximum of ten percent (10%) of the non-critical area of WS-II and WS-III watersheds and, for local governments that do not choose to incorporate the high density option, ten percent (10%) of the protected area of WS-IV watersheds may be developed with new development at a maximum of seventy percent (70%) built-upon surface area. Records for each watershed shall include the total acres of non-critical watershed area, total acres eligible to be developed under this option, total acres approved for this development option, and individual records for each project with the following information: location, number of developed acres, type of land use and stormwater management plan (if applicable).
 - e. The Watershed Administrator is granted the authority to administer and enforce the provisions of this Section, exercising in the fulfillment of his responsibility to full police power of the City of Eden. The Watershed Administrator, or his duly authorized representative, may enter any building, structure, or premises, as provided by law, to perform any duty imposed upon him by this Section.
 - f. The Watershed Administrator shall keep a record of variances to the local Water Supply Watershed Protection Section. This record shall be submitted to Water Quality Section of the Division of Environmental Management on or before January 1 of the following year and shall provide a description of each project receiving a variance and the reasons for granting the variance.
- 2. Appeal from the Watershed Administrator.**
- a. Any order, requirement, decision or determination made by the Watershed Administrator may be appealed to and decided by the Board of Adjustment.
 - b. Any appeal from a decision of the Watershed Administrator must be submitted to the Board of Adjustment within thirty (30) days from the date the order, interpretation, decision or determination is made. All appeals must be made in writing stating the reasons for appeal. Following submission of an appeal, the Watershed Administrator shall transmit to the Board all papers constituting the record upon which the action appealed from was taken.
 - c. An appeal stays all proceedings in furtherance of the action appealed, unless the officer from whom the appeal is taken certifies to the Board after the notice of appeal has been filed with him, that by reason of facts stated in the certificate, a stay would in his opinion cause imminent peril to life or property. In such case, proceedings shall not be stayed otherwise than by a restraining order which may be granted by the Board or by a court of record on application of notice of the officer from whom the appeal is taken and upon due cause shown.
 - d. The Board shall fix a reasonable time for hearing the appeal and give notice thereof to the parties and shall decide the same within a reasonable time. At the hearing, any party may appear in person, by agent or by attorney.
- 3. Changes and Amendments to the Watershed Protection Section.**
- a. See *Article 3 – Development & Administrative Review Procedures*
- 4. Establishment, Powers, Duties, and Appeals of the Watershed Review Board.**

The Watershed Review Board provides oversight and appeals of decisions of this Section. See *Article 2 – Administration, Section 2.11*.

10.02 FLOOD DAMAGE PREVENTION

Commentary: The section numbering and formatting hierarchy of this section is intentionally different from the remainder of this Article/Ordinance and has been kept consistent with the model ordinance from the state in order to ensure easy reference for users and compatibility with the formatting style and referencing used statewide in the model ordinance.

Article 1. STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE AND OBJECTIVES.

Section A. STATUTORY AUTHORIZATION.

Municipal: The Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Chapter 160D; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the City Council of the City of Eden, North Carolina, does ordain as follows:

Section B. FINDINGS OF FACT.

- (1) The flood prone areas within the planning jurisdiction of the City of Eden 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.

Section C. STATEMENT OF PURPOSE.

It is the purpose of this Section 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;
- (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.

Section D. OBJECTIVES.

The objectives of this Section are:

- (1) to protect human life and health;

- (2) to minimize expenditure of public money for costly flood control projects;
- (3) to minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (4) to minimize prolonged business losses and interruptions;
- (5) to 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) to help maintain a stable tax base by providing for the sound use and development of flood prone areas; and
- (7) to ensure that potential buyers are aware that property is in a Special Flood Hazard Area.

Article 2. DEFINITIONS.

Unless specifically defined below, words or phrases used in this Section shall be interpreted so as to give them the meaning they have in common usage and to give this Section its most reasonable application.

“Accessory Structure (Appurtenant Structure)” means a structure located on the same parcel of property as the principal structure and the use of which is incidental to the use of the principal structure. Garages, carports and storage sheds are common urban accessory structures. Pole barns, hay sheds and the like qualify as accessory structures on farms, and may or may not be located on the same parcel as the farm dwelling or shop building.

“Addition (to an existing building)” means an extension or increase in the floor area or height of a building or structure.

“Appeal” means a request for a review of the floodplain administrator's interpretation of any provision of this Section.

“Area of Shallow Flooding” means a designated Zone AO on a community's Flood Insurance Rate Map (FIRM) with base flood depths determined to be from one (1) to three (3) feet. These areas are located where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident.

“Area of Special Flood Hazard” see “Special Flood Hazard Area (SFHA)”

“Basement” means any area of the building having its floor subgrade (below ground level) on all sides.

“Base Flood” means the flood having a one (1) percent chance of being equaled or exceeded in any given year.

“Base Flood Elevation (BFE)” means a determination of the water surface elevations of the base flood as published in the Flood Insurance Study. When the BFE has not been provided in a “Special Flood Hazard Area”, it may be obtained from engineering studies available from a Federal or State or other source using FEMA approved engineering methodologies. This elevation, when combined with the “Freeboard”, establishes the “Regulatory Flood Protection Elevation”.

“Building” see “Structure”

“Chemical Storage Facility” means a building, portion of a building, or exterior area adjacent to a building used for the storage of any chemical or chemically reactive products.

“Development” means any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

“Disposal” means, as defined in NCGS 130A-290(a)(6), the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste into or on any land or water so that the solid waste or any constituent part of the solid waste may enter the environment or be emitted into the air or discharged into any waters, including groundwaters.

“Elevated Building” means a non-basement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

“Encroachment” means the advance or infringement of uses, fill, excavation, buildings, permanent structures or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

“Existing Manufactured Home Park or Manufactured Home Subdivision” means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) was completed before the original effective date of the floodplain management regulations adopted by the community.

“Flood” or “Flooding” means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) the overflow of inland or tidal waters; and/or
- (2) the unusual and rapid accumulation of runoff of surface waters from any source.

“Flood Boundary and Floodway Map (FBFM)” means an official map of a community, issued by the Federal Emergency Management Agency, on which the Special Flood Hazard Areas and the floodways are delineated. This official map is a supplement to and shall be used in conjunction with the Flood Insurance Rate Map (FIRM).

“Flood Hazard Boundary Map (FHBM)” means an official map of a community, issued by the Federal Emergency Management Agency, where the boundaries of the Special Flood Hazard Areas have been defined as Zone A.

“Flood Insurance” means the insurance coverage provided under the National Flood Insurance Program.

“Flood Insurance Rate Map (FIRM)” means an official map of a community, issued by the Federal Emergency Management Agency, on which both the Special Flood Hazard Areas and the risk premium zones applicable to the community are delineated.

“Flood Insurance Study (FIS)” means an examination, evaluation, and determination of flood hazards, corresponding water surface elevations (if appropriate), flood hazard risk zones, and other flood data in a community issued by the Federal Emergency Management Agency. The Flood Insurance Study report includes Flood Insurance Rate Maps (FIRMS) and Flood Boundary and Floodway Maps (FBFMS), if published.

“Flood Prone Area” see “Floodplain”

“Floodplain” means any land area susceptible to being inundated by water from any source.

“Floodplain Administrator” is the individual appointed to administer and enforce the floodplain management regulations.

“Floodplain Development Permit” means any type of permit that is required in conformance with the provisions of this Section, prior to the commencement of any development activity.

“Floodplain Management” means the operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing, where possible, natural resources in the floodplain, including, but not limited to, emergency preparedness plans, flood control works, floodplain management regulations, and open space plans.

“Floodplain Management Regulations” means this Section and other zoning Sections, subdivision regulations, building codes, health regulations, special purpose Sections, and other applications of police power which control development in flood-prone areas. This term describes federal, state or local regulations, in any combination thereof, which provide standards for preventing and reducing flood loss and damage.

“Floodproofing” means any combination of structural and nonstructural additions, changes, or adjustments to structures, which reduce or eliminate flood damage to real estate or improved real property, water and sanitation facilities, structures, and their contents.

“Floodway” means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot.

“Flood Zone” means a geographical area shown on a Flood Hazard Boundary Map or Flood Insurance Rate Map that reflects the severity or type of flooding in the area.

“Freeboard” means the height added to the Base Flood Elevation (BFE) to account for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization on the watershed. The Base Flood Elevation plus the freeboard establishes the “Regulatory Flood Protection Elevation”.

“Functionally Dependent Facility” means a facility which cannot be used for its intended purpose unless it is located in close proximity to water, such as a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding, or ship repair. The term does not include long-term storage, manufacture, sales, or service facilities.

“Hazardous Waste Facility” means, as defined in NCGS 130A, Article 9, a facility for the collection, storage, processing, treatment, recycling, recovery, or disposal of hazardous waste.

“Highest Adjacent Grade (HAG)” means the highest natural elevation of the ground surface, prior to construction, immediately next to the proposed walls of the structure.

“Historic Structure” means any structure that is:

- (a) listed individually in the National Register of Historic Places (a listing maintained by the US Department of Interior) or preliminarily determined by the Secretary of Interior as meeting the requirements for individual listing on the National Register;
- (b) certified or preliminarily determined by the Secretary of Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- (c) individually listed on a local inventory of historic landmarks in communities with a “Certified Local Government (CLG) Program”; or
- (d) certified as contributing to the historical significance of a historic district designated by a community with a “Certified Local Government (CLG) Program”

Certified Local Government (CLG) Programs are approved by the US Department of the Interior in cooperation with the North Carolina Department of Cultural Resources through the State Historic Preservation Officer as having met the requirements of the National Historic Preservation Act of 1966 as amended in 1980.

“Lowest Adjacent Grade (LAG)” means the elevation of the ground, sidewalk or patio slab immediately next to the building, or deck support, after completion of the building.

“Lowest Floor” means lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or limited storage in an area other than a basement area is not considered a building's lowest floor, provided that such an enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this Section.

“Manufactured Home” means a structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term “manufactured home” does not include a “recreational vehicle”.

“Manufactured Home Park or Subdivision” means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

“Market Value” means the building value, not including the land value and that of any accessory structures or other improvements on the lot. Market value may be established by independent certified appraisal; replacement cost depreciated for age of building and quality of construction (Actual Cash Value); or adjusted tax assessed values.

“Mean Sea Level” means, for purposes of this Section, the National Geodetic Vertical Datum (NGVD) as corrected in 1929, the North American Vertical Datum (NAVD) as corrected in 1988, or other vertical control datum used as a reference for establishing varying elevations within the floodplain, to which Base Flood Elevations (BFEs) shown on a FIRM are referenced. Refer to each FIRM panel to determine datum used.

“New Construction” means structures for which the “start of construction” commenced on or after the effective date of the original version of the community’s Flood Damage Prevention Section and includes any subsequent improvements to such structures.

“Non-Encroachment Area” means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot as designated in the Flood Insurance Study report.

“Post-FIRM” means construction or other development for which the “start of construction” occurred on or after the effective date of the initial Flood Insurance Rate Map for the area.

“Pre-FIRM” means construction or other development for which the “start of construction” occurred before the effective date of the initial Flood Insurance Rate Map for the area.

“Principally Above Ground” means that at least 51% of the actual cash value of the structure is above ground.

“Public Safety” and/or “Nuisance” means anything which is injurious to the safety or health of an entire community or neighborhood, or any considerable number of persons, or unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake or river, bay, stream, canal, or basin.

“Recreational Vehicle (RV)” means a vehicle, which is:

- (a) built on a single chassis;
- (b) 400 square feet or less when measured at the largest horizontal projection;
- (c) designed to be self-propelled or permanently towable by a light duty truck; and
- (d) designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel, or seasonal use.

“Reference Level” is the bottom of the lowest horizontal structural member of the lowest floor, excluding the foundation system, for structures within all Special Flood Hazard Areas.

“Regulatory Flood Protection Elevation” means the “Base Flood Elevation” plus the “Freeboard”. In “Special Flood Hazard Areas” where Base Flood Elevations (BFEs) have been determined, this elevation shall be the BFE plus two (2) feet of freeboard. In “Special Flood Hazard Areas” where no BFE has been established, this elevation shall be at least two (2) feet above the highest adjacent grade. *(Two (2) feet is a State-recommended minimum, greater than two (2) feet is OPTIONAL)*

“Remedy a Violation” means to bring the structure or other development into compliance with State and community floodplain management regulations, or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of the Section or otherwise deterring future similar violations, or reducing Federal financial exposure with regard to the structure or other development.

“Riverine” means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

“Salvage Yard” means any non-residential property used for the storage, collection, and/or recycling of any type of equipment, and including but not limited to vehicles, appliances and related machinery.

“Solid Waste Disposal Facility” means, as defined in NCGS 130A-290(a)(35), any facility involved in the disposal of solid waste.

“Solid Waste Disposal Site” means, as defined in NCGS 130A-290(a)(36), any place at which solid wastes are disposed of by incineration, sanitary landfill, or any other method.

“Special Flood Hazard Area (SFHA)” means the land in the floodplain subject to a one (1%) percent or greater chance of being flooded in any given year, as determined in Article 3, Section B of this Section.

“Start of Construction” includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of the building, whether or not that alteration affects the external dimensions of the building.

“Structure” means a walled and roofed building, a manufactured home, or a gas, liquid, or liquefied gas storage tank that is principally above ground.

“Substantial Damage” means damage of any origin sustained by a structure during any one-year period whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. See definition of “substantial improvement”. *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. (The last sentence is **OPTIONAL** but required for eligibility for Increased Cost of Compliance (ICC) benefits for repetitive losses.)*

“Substantial Improvement” means any combination of repairs, reconstruction, rehabilitation, addition, or other improvement of a structure, taking place during any one-year period for which the cost equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “substantial damage”, regardless of the actual repair work performed. The term does not, however, include either:

- (a) any correction of existing violations of State or community health, sanitary, or safety code specifications which have been identified by the community code enforcement official and which are the minimum necessary to assure safe living conditions; or,
- (b) any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure.

“Variance” is a grant of relief from the requirements of this Section.

“Violation” means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in Sections 4 and 5 is presumed to be in violation until such time as that documentation is provided.

“Water Surface Elevation (WSE)” means the height, in relation to mean sea level, of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

“Watercourse” means a lake, river, creek, stream, wash, channel or other topographic feature on or over which waters flow at least periodically. Watercourse includes specifically designated areas in which substantial flood damage may occur.

Article 3. GENERAL PROVISIONS.

Section A. LANDS TO WHICH THIS SECTION APPLIES.

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

Section 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 Flood Insurance Study (FIS) and its accompanying Flood Insurance Rate Maps (FIRM) for Rockingham County dated July 3, 2007 which are adopted by reference and declared to be a part of this Section

In addition, upon annexation into the City of Eden or inclusion in the Extra-Territorial Jurisdiction (ETJ), the Special Flood Hazard Areas identified by the Federal Emergency Management Agency (FEMA) and/or produced under the Cooperating Technical State agreement between the State of North Carolina and FEMA as stated above, for the Unincorporated Areas of Rockingham County, with accompanying maps and other supporting data are adopted by reference and declared to be a part of this Section.

Section C. ESTABLISHMENT OF FLOODPLAIN DEVELOPMENT PERMIT.

A Floodplain Development Permit shall be required in conformance with the provisions of this Section prior to the commencement of any development activities within Special Flood Hazard Areas determined in accordance with Article 3, Section B of this Section.

Section 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 Section and other applicable regulations.

Section E. ABROGATION AND GREATER RESTRICTIONS.

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

Section F. INTERPRETATION.

In the interpretation and application of this Section, 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.

Section G. WARNING AND DISCLAIMER OF LIABILITY.

The degree of flood protection required by this Section 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 Section 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 Section shall not create liability on the part of the City of Eden or by any officer or employee thereof for any flood damages that result from reliance on this Section or any administrative decision lawfully made hereunder.

Section H. PENALTIES FOR VIOLATION.

Violation of the provisions of this Section 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 misdemeanor. Any person who violates this Section or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than \$50.00 or imprisoned for not more than thirty (30) days, or both. Each day such violation continues shall be considered as a separate offense. Nothing herein contained shall prevent the City of Eden from taking such other lawful action as is necessary to prevent or remedy any violation as per the City of Eden UDO and the Eden City Code.

Article 4. ADMINISTRATION.

Section A. DESIGNATION OF FLOODPLAIN ADMINISTRATOR.

The Planning and Inspections Director of the City of Eden, hereinafter referred to as the "Floodplain Administrator", is hereby appointed to administer and implement the provisions of this Section.

Section 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 Article 3, Section 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 Article 3, Section B;
 - iv. the boundary of the floodway(s) or non-encroachment area(s) as determined in Article 3, Section B;
 - v. the Base Flood Elevation (BFE) where provided as set forth in Section 3, Subsection B; Section 4, Subsection C(11 & 12); or Section 5, Subsection D;
 - vi. the old and new location of any watercourse that will be altered or relocated as a result of proposed development;
 - (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 flood-proofed; 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 and an operational plan that includes, but is 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 Section are met. These details include but are not limited to:
 - 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);
 - ii. Openings to facilitate equalization of hydrostatic flood forces on walls in accordance with Section 5, Subsection B(4)(d), when solid foundation perimeter walls are used in Zones A, AO, AE, and A1-30;
 - (e) Usage details of any enclosed areas below the regulatory flood protection elevation.

- (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) Copies of all other Local, State and Federal permits required prior to floodplain development permit issuance (Wetlands, Endangered Species, Erosion and Sedimentation Control, Riparian Buffers, Mining, etc.)
- (h) Documentation for placement of Recreational Vehicles and/or Temporary Structures, when applicable, to ensure Section 5, Subsections B(6 & 7) of this Section 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 description of the development to be permitted under the floodplain development permit.
- (b) The Special Flood Hazard Area determination for the proposed development per available data specified in Section 3, Subsection 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, as applicable.
- (g) The flood openings requirements, if in Zones A, AO, AE or A1-30.

(3) Certification Requirements.

(a) Elevation Certificates

- i. An Elevation Certificate (FEMA Form 81-31) 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 81-31) 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 81-31) is required after construction is completed and prior to Certificate of Compliance/Occupancy issuance. It shall be the duty of the permit holder to submit

to the 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

If non-residential floodproofing is used to meet the regulatory flood protection elevation requirements, a Floodproofing Certificate (FEMA Form 81-65), with supporting data and an operational plan, 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 floodproofed design elevation of the reference level and all attendant utilities, in relation to mean sea level. Floodproofing certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. The floodplain administrator shall review the certificate data and plan. Deficiencies detected by such review shall be corrected by the applicant prior to permit approval. Failure to submit the certification or failure to make required 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.

(c) If a manufactured home is placed within Zone A, AO, AE, or A1-30 and the elevation of the chassis is more than 36 inches in height above grade, an engineered foundation certification is required per Section 5, Subsection B(3).

(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 Zone A, AO, AE or A1-30, are exempt from the elevation/floodproofing certification requirements specified in items (a) and (b) of this subsection:

- i. Recreational Vehicles meeting requirements of Section 5, Subsection B(6)(a);
- ii. Temporary Structures meeting requirements of Section 5, Subsection B(7); and
- iii. Accessory Structures less than 150 square feet meeting requirements of Section 5, Subsection B(8).

Section 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 Section have been satisfied.
- (2)** Advise permittee that additional Federal or State permits (Wetlands, Endangered Species, Erosion and Sedimentation Control, Riparian Buffers, Mining, etc.) may be required, and require that copies of such permits be provided and maintained on file with the floodplain development permit.

- (3) Notify adjacent communities and the North Carolina Department of Crime Control and 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 not diminished.
- (5) Prevent encroachments into floodways and non-encroachment areas unless the certification and flood hazard reduction provisions of Section 5, Subsection E 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 or substantially improved structures, in accordance with Section 4, Subsection B(3).
- (7) Obtain actual elevation (in relation to mean sea level) to which all new and substantially improved structures and utilities have been floodproofed, in accordance with Section 4, Subsection B(3).
- (8) Obtain actual elevation (in relation to mean sea level) of all public utilities in accordance with Section 4, Subsection B(3).
- (9) When floodproofing is utilized for a particular structure, obtain certifications from a registered professional engineer or architect in accordance with Section 4, Subsection B(3) and Section 5, Subsection B(2).
- (10) Where interpretation is needed as to the exact location of boundaries of the Special Flood Hazard 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 Section.
- (11) When Base Flood Elevation (BFE) data has not been provided in accordance with Section 3, Subsection B, obtain, review, and reasonably utilize any Base Flood Elevation (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 5, Subsection D(2)(b), in order to administer the provisions of this Section.
- (12) When Base Flood Elevation (BFE) data is provided but no floodway nor non-encroachment area data has been provided in accordance with Section 3, Subsection 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 Section.
- (13) When the lowest ground elevation of a parcel or structure in a Special Flood Hazard Area is above the Base Flood Elevation, advise the property owner of the option to apply for a Letter of Map Amendment (LOMA) from FEMA. Maintain a copy of the Letter of Map Amendment (LOMA) issued by FEMA in the floodplain development permit file.
- (14) Permanently maintain all records that pertain to the administration of this Section and make these records available for public inspection.
- (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 Section 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 Section, 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 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, or 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 all 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 4, Subsection 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 Section 3, Subsection B of this Section, 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-F) and Letters of Map Revision (LOMR).

Section 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 Flood Damage Prevention Section;
 - (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 appears appropriate.
- (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 Section, they 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, they 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 misdemeanor and shall be punished at the discretion of the court.

Section E. VARIANCE PROCEDURES.

- (1) The Board of Adjustment as established by the City of Eden, hereinafter referred to as the “appeal board”, shall hear and decide requests for variances from the requirements of this Section.
- (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 2 of this Section, provided provisions of Section 4, Subsection E(9)(b), (c), and (e) have been satisfied, and such facilities are protected by methods that minimize flood damages.
 - (c) any other type of development, provided it meets the requirements stated in 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 Section, 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 2 of this Section 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.
- (6) Upon consideration of the factors listed above and the purposes of this Section, the appeal board may attach such conditions to the granting of variances as it deems necessary to further the purposes of this Section.
- (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 Base Flood Elevation increases risks to life and property, and that the issuance of a variance to construct a structure below the Base Flood Elevation 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 Sections.
 - (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 Sections.
- (10) A variance may be issued for solid waste disposal facilities, 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 City of Eden has notified the Secretary of the North Carolina Department of Crime Control and Public Safety of its intention to grant a variance at least thirty (30) calendar days prior to granting the variance.

Article 5. PROVISIONS FOR FLOOD HAZARD REDUCTION.

Section 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.
- (3) All new construction and substantial improvements shall be constructed by methods and practices that minimize flood damages.
- (4) Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding. These include, but are not limited to, HVAC equipment, water softener units, bath/kitchen fixtures, ductwork, electric/gas meter panels/boxes, utility/cable boxes, appliances (washers, dryers, refrigerators, freezers, etc.), hot water heaters, and electric outlets/switches.
- (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 flood waters.
- (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 Section, shall meet the requirements of "new construction" as contained in this Section.
- (9) Nothing in this Section shall prevent the repair, reconstruction, or replacement of a building or structure existing on the effective date of this Section 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 Section.
- (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 4, Subsection 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 according to Section 4, Subsection B(3) of this Section.
- (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.

Section B. SPECIFIC STANDARDS.

In all Special Flood Hazard Areas where Base Flood Elevation (BFE) data has been provided, as set forth in Section 3, Subsection B, or Section 4, Subsection C(11 & 12), the following provisions, in addition to Section 5, Subsection 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 2 of this Section.
- (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 2 of this Section. Structures located in A, AE and A1-30 Zones 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 5, Subsection H(3). A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the Floodplain Administrator as set forth in Section 4, Subsection B(3), along with the operational and maintenance plans.
- (3) Manufactured Homes.
 - (a) New or replacement manufactured homes shall be elevated so that the reference level of the manufactured home is no lower than the regulatory flood protection elevation, as defined in Section 2 of this Section.
 - (b) Manufactured homes shall be securely anchored to an adequately anchored foundation to resist flotation, collapse, and lateral movement, either by engineer certification, 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 5, Subsection B(4)(a), (b), and (c).
 - (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 be constructed entirely of flood resistant materials below the regulatory flood protection elevation;
 - (c) 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 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
 - 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, both the existing structure and the addition and/or improvements must comply with the standards for new construction.
 - (b) Additions to post-FIRM structures with no modifications 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.

- ii. a substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards for new construction.
 - (d) Where an independent perimeter load-bearing wall is provided between the addition and the existing building, the addition(s) shall be considered a separate building and only the addition must comply with the standards for new construction.
- (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 months, renewable up to one 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 Section 5, Subsection A(1);
 - (f) All service facilities such as electrical shall be installed in accordance with Section 5, Subsection 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 Section 5, Subsection B(4)(c).

An accessory structure with a footprint less than 150 square feet that satisfies the criteria outlined above does not require an elevation or floodproofing certificate. Elevation or floodproofing certifications are required for all other accessory structures in accordance with Section 4, Subsection B(3).

Section C. RESERVED.

Section D. STANDARDS FOR FLOODPLAINS WITHOUT ESTABLISHED BASE FLOOD ELEVATIONS.

Within the Special Flood Hazard Areas designated as Approximate Zone A and established in Section 3, Subsection B, where no Base Flood Elevation (BFE) data has been provided by FEMA, the following provisions, in addition to Section 5, Subsections A and B, 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 one of the following criteria set in priority order:
 - (a) If 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 Section and shall be elevated or floodproofed in accordance with standards in Section 4, Subsection C(11 & 12).
 - (b) 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 per Section 3, Subsection B to be utilized in implementing this Section.
 - (c) 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 to or above the regulatory flood protection elevation, as defined in Section 2.

Section E. STANDARDS FOR RIVERINE FLOODPLAINS WITH BFE BUT WITHOUT ESTABLISHED FLOODWAYS OR NON-ENCROACHMENT AREAS.

Along rivers and streams where BFE data is provided 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 outlined in Section 5, Subsections 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 foot at any point within the community.

Section 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 3, Subsection 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 Section 5, Subsections 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 it has been demonstrated that:
 - (a) 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 5, Subsection F(1) is satisfied, all development shall comply with all applicable flood hazard reduction provisions of this Section.
- (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 5, Subsection B(3); and
 - (b) the no encroachment standard of Section 5, Subsection F(1).

Section G. STANDARDS FOR AREAS OF SHALLOW FLOODING (ZONE AO).

Located within the Special Flood Hazard Areas established in Section 3, Subsection 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 Section 5, Subsection A, 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 two (2) feet, above the highest adjacent grade; or at least two feet above the highest adjacent grade plus a freeboard of two (2) feet 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 5, Subsection H(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 as per Section 4, Subsection B(3) and Section 5, Subsection B(2).
- (3) Adequate drainage paths shall be provided around structures on slopes, to guide floodwaters around and away from proposed structures.

SECTION 6. LEGAL STATUS PROVISIONS.

Section A. EFFECT ON RIGHTS AND LIABILITIES UNDER THE EXISTING FLOOD DAMAGE PREVENTION SECTION.

This Section in part comes forward by re-enactment of some of the provisions of the flood damage prevention Section enacted November 15, 1977 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 Section shall not affect any action, suit or proceeding instituted or pending. All provisions of the flood damage prevention Section enacted on November 15, 1977, as amended, which are not reenacted herein are repealed.

Section 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 Section; 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 Section.

Section C. EFFECTIVE DATE.

This Section shall become effective upon adoption.

Section D. ADOPTION CERTIFICATION.

I hereby certify that this is a true and correct copy of the Flood Damage Prevention Section as adopted by the City Council of the City of Eden, North Carolina, on the 17th day of July, 2007.

10.03 STORMWATER MANAGEMENT

A. PURPOSE AND APPLICABILITY

Development activities tend to increase the volume of stormwater runoff due to the elimination of pervious surfaces through paving and the construction of buildings and other structures. Stormwater runoff impacts the public health, safety, and welfare by flooding private and public property, by discharging pollutants, such as oils and greases, into receiving water bodies, and by making public streets and roads unsafe. Therefore, applicants for development authorization in which the total impervious surface will exceed 20,000 square feet, shall not be entitled to a zoning compliance permit until such time as the applicant has submitted a stormwater management plan demonstrating compliance with this section.

B. PLAN PROTECTION

The stormwater management plan shall be prepared, signed, and sealed by a registered or licensed North Carolina professional with qualifications appropriate for the type of system required and to the degree they are permitted to do so under the law.

C. CONCEPTUAL STORMWATER MANAGEMENT PLAN

1. Purpose

The purpose of a conceptual stormwater management plan is to demonstrate the likelihood that a development undergoing site plan review or special use review will meet the standards for stormwater management contained in this section.

2. Contents of a conceptual stormwater management plan

When a conceptual stormwater management plan is required, the following requirements shall apply:

- a. The plan shall show the location of proposed improvements, shall only include stormwater related features, and shall not be shown on any other plan such as a site plan, an erosion control plan, or a landscape plan.
- b. Calculations, including all assumptions of the pre- and post-development stormwater runoff rate in cubic feet per second generated by the peak runoff from a ten-year storm.
- c. Identification of drainage areas.
- d. A general layout of stormwater drainage features within the development.
- e. If applicable, a statement describing the feature or features proposed to limit the post development stormwater runoff rate to the pre-development stormwater runoff rate, and the proposed location and size of feature(s).
- f. Location of the point(s) of discharge of the stormwater system.
- g. Location of connection(s) to the City stormwater system, if applicable.

If in the opinion of the City Engineer, the conceptual stormwater management plan does not adequately address the requirements of the stormwater resolution, additional information may be required.

D. CONTENTS OF FINAL STORMWATER MANAGEMENT PLAN

Final stormwater management plans shall contain the following elements:

1. A plan showing all pre- and post-development features with (1) a table listing and describing each feature and whether or not it is impervious, (2) each feature's area in square feet or acres and the percent each feature represents of the total area, and (3) identification and delineation of all drainage areas and point(s) of discharge of the stormwater system. This plan shall be drawn in a suitable easy to read scale and shall be a separate document and not part of any other plan.
2. Topographic contours or spot elevations for all pre- and post-development areas. Topographic contours or spot elevations shall clearly show pre- and post-development drainage patterns.
3. Calculations showing the pre- and post-development rate of stormwater runoff in cubic-feet-per second generated by the peak runoff rate from a ten-year storm.
4. Details of proposed stormwater drainage structures, infiltration areas, retention ponds or detention ponds including as appropriate pertinent elevations, sections, outlet details, area capacity curves, identifying labels, and other information as required by the City Engineer.
5. Details and logical calculations and tables showing all design assumptions, methods of analysis, the pre- and post-development runoff qualities, capacities of proposed structures, slopes, sizes, identifying labels, and other information as required by the City Engineer.

E. STANDARDS FOR REVIEW

Unless the applicant has been approved to discharge stormwater runoff into an existing City stormwater facility with sufficient capacity to accommodate increased flows attributable to the proposed development as provided below, the stormwater management plan shall be designed so that the post-development rate of stormwater runoff, shall not exceed the pre-development rate of stormwater runoff. The stormwater management plan may propose retention either on-site or off-site or by means of a combination of on-site and off-site. If any or all of the stormwater from a design storm is proposed to be retained off-site, such shall be done only under express terms of a recorded easement.

F. DISCHARGE INTO CITY STORMWATER FACILITY

An applicant may request authorization to discharge stormwater runoff from a proposed development into an existing City stormwater facility. Upon determination that there is sufficient capacity in the City stormwater facility to accommodate the runoff associated with the proposed development, as well as existing and other anticipated runoff, the Administrator, or his designee, may authorize the applicant to discharge into the City facility. All costs associated with such discharge, including installation of necessary storm sewers, shall be borne by the applicant.

G. INSTALLATION OF STORMWATER SYSTEM

The stormwater system shall be installed in substantial conformity with the plans. If there are significant deviations from the design, a revised plan showing the deviations shall be submitted in time to permit the review and approval of the plans before any construction work affected by such deviations is begun. Upon

completion of construction, a registered professional appropriate for the type of stormwater system designed must certify in writing to the City Engineer that the system was inspected during construction and was constructed in substantial conformity with the approved plans, and shall submit a suitable plan clearly marked "As-Built" showing the system as constructed. No Certificate of Occupancy shall be issued until these requirements are met and the as-built plan has been approved. If a development has been approved for construction in phases, a temporary certificate of occupancy may be requested for each phase as long as all other requirements are met. The as-built plan described above will be required at the completion of all phases.

H. MAINTENANCE OF STORMWATER MANAGEMENT FACILITIES

1. The owner of a stormwater management facility shall be responsible for maintenance of that facility unless the City accepts maintenance as provided below. This responsibility shall be noted on the final plat and deeds for any affected lots.
2. Any detention or retention facilities approved under this Section shall be subject to inspection by the City Engineer at least annually and the owner shall pay an annual inspection fee the amount of which shall be determined by resolution of City Council. The owner shall correct any deficiencies within 30 calendar days of written notification thereof. Failure to correct deficiencies or to pay the annual inspection fee shall constitute a violation of this Section.
3. Whenever an existing or future private stormwater management facility is proposed to serve a development undergoing site plan or special use review, the following shall be provided the Administrator prior to issuance of a certificate of occupancy.
4. A written inspection and maintenance agreement in a form acceptable to the City Attorney and executed by the applicant and the owners of the facility, which shall bind the parties thereto and all subsequent owners, successors and assigns, and provide for the following:
 - a. The maintenance of the facility. If a party other than the applicant assumes primary responsibility for the maintenance of the facility, the applicant shall guarantee the maintenance of the facility and assume ultimate responsibility thereof.
 - b. Access to the facility at reasonable times for inspection by the City and/or its agents or representatives.
 - c. That if an order directing the correction, repair, replacement, or maintenance of the facility or of any portion thereof is not satisfactorily complied with within a reasonable period of time, as deemed appropriate by the City Engineer, the City may, after notice to the owner, enter the land and perform all necessary work to place the facility in proper working condition, and may assess the owners of the subject property with the cost of said work, which cost shall be a lien on such property and may be collected as provided in G.S. § 160A-193. Notice shall be provided five (5) calendar days prior to entry and performance of necessary work by the City. Notice shall be in writing and shall be delivered to the owner by hand-delivery, by certified mail, return receipt requested, or by any other means allowed by Rule 4 of the North Carolina Rules of Civil Procedure. The owners of all property served by the facility shall be jointly and severally responsible to the City for the maintenance of the facility and liable for any costs incurred by the City pursuant to said agreement, and all such properties are jointly and severally subject to the imposition of liens for said costs.

- d. The Inspection and Maintenance Agreement shall be recorded in the Register of Deeds Office for Rockingham County at the expense of the applicant.
 - e. Any other provision as may be reasonable required by the City Attorney to achieve the purposes of this section.
5. When deemed necessary by the City Attorney, an easement in a form approved by the City Attorney, granting the City and its agents and representatives adequate and perpetual access to the facility and sufficient area for inspection and maintenance, if necessary, by the City, its agents and representatives. Said easements shall be filed in the Office of the Register of Deeds for Rockingham County at the expense of the applicant, and shall bind all subsequent owners and assigns of the facility and of the property on which the easement is located.

I. EMERGENCY AUTHORITY

If the City Engineer determines that the condition of any stormwater management facility presents an immediate danger to the public health and safety because of an unsafe condition or improper maintenance, the City Engineer shall take such actions as may be necessary to protect the public and make the facility safe. Any costs incurred by the City as a result of the City Engineer's action shall be assessed against any or all of the owners of property served by said facility who shall be jointly and severally liable for all said costs and whose property shall jointly and severally be subject to a lien for said costs which may be collected as provided in G.S. § 160A-193.