ARTICLE 7. NATURAL RESOURCE PROTECTION

§7.1. General

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

§7.2. Resource Conservation Areas

§7.2.1. Defined

A. All resource conservation areas shall be unoccupied or predominately unoccupied by buildings or other impervious surfaces. Unoccupied or predominately unoccupied by buildings or other impervious surfaces shall mean that not more than five percent of the area of any resource conservation area shall be occupied by such surfaces.

B. Resource conservation areas shall be identified on plats as being permanently set aside. No resource conservation area shall be counted towards lot area required by Article 2. This shall not preclude the platting of lots in such areas, provided that adequate lot area outside the resource conservation area is provided to meet the minimum lot area requirements of Article 2.

C. Resource conservation areas shall be counted towards the recreation and open space requirements as set forth in §3.3.

§7.2.2. Determination of Resource Conservation Areas

The following are considered resource conservation areas and shall be unoccupied or predominately unoccupied by buildings or other impervious surfaces, unless the applicant demonstrates to the Board of Commissioners that this provision would constitute an unusual hardship and is counter to the purposes of this UDO:

A. The 100-year floodplain including water bodies, such as lakes, ponds, streams, creeks and rivers;

B. Streamside buffer areas (see §7.5);

C. Slopes above 25 percent of at least 20,000 square feet contiguous area; and

D. Jurisdictional wetlands under Federal law (Section 404) that meet the definition applied by the Army Corps of Engineers.

§7.2.3. Resource Conservation Areas Shown on Plat

All resource conservation areas shall be shown on all preliminary or final plat by metes and bounds description.

§7.2.4. Permitted Uses of Resource Conservation Areas

Uses of resource conservation areas may include the following:

A. Conservation areas for natural, archeological or historical resources;

B. Meadows, woodlands, wetlands, wildlife corridors, game preserves, or similar conservation-oriented areas;

C. Agriculture, horticulture, silviculture or pasture uses, provided that all applicable best management practices are used to minimize environmental impacts;

D. Walking or bicycle trails, provided they are constructed of pervious paving or natural materials;

E. Easements for drainage, access, and underground utility lines; and

F. Other conservation-oriented uses compatible with the purposes of this UDO.

§7.2.5. Prohibited Uses of Resource Conservation Areas

Use of resource conservation areas may not include the following:

A. Stormwater management facilities;

B. Roads, parking lots and impervious surfaces, except as specifically authorized; and

C. Golf courses, agricultural and forestry activities not conducted according to accepted best management practices.

§7.2.6. Ownership and Maintenance

A. Ownership

Resource conservation areas shall be accepted and owned by one of the following entities:

1. Land Conservancy or Land Trust

The responsibility for maintenance shall be borne by a land conservancy or land trust.

2. Homeowners Association

A homeowners' association representing residents of the subdivision shall own the resource conservation areas. Membership in the association shall be mandatory and automatic for all homeowners of the subdivision and their successors. The homeowners' association shall have lien authority to ensure the collection of dues from all members. The responsibility for maintenance shall be borne by the homeowners' association.

3. Private landowner

A private landowner may retain ownership of the resource conservation areas. The responsibility for maintenance shall be borne by the private landowner.

B. Maintenance

Resource conservation area maintenance is limited to removal of litter, dead tree and plant materials and brush, which causes a hazard or blocks trails or pathways. Natural water courses are to be maintained as free-flowing and devoid of debris. Stream channels shall be maintained so as not to alter floodplain levels. Unless otherwise specified by the Board of Commissioners, maintenance is limited to insuring that there exist no hazards, nuisances or unhealthy conditions.

C. Legal Instrument for Permanent Protection

1. Resource conservation areas shall be protected in perpetuity by a binding legal instrument that is recorded with the deed.

2. The instrument for permanent protection shall include clear restrictions on the use of the resource conservation area. These restrictions shall include all restrictions contained in this section, as well as any further restrictions the applicant chooses to place on the use of the resource conservation areas. Where appropriate, the instrument shall allow for stream or habitat restoration.

§7.3. Watershed Protection

§7.3.1. Authority

The Legislature of the State of North Carolina has, in G.S. §160D-926, General Ordinance Authority and in G.S. §143-214.5, Watershed Protection Rules, delegated the responsibility and authority to local governmental units to establish water supply watershed protection programs, to regulate land use and development within water supply watersheds, and to adopt regulations designed to promote the public health, safety and general welfare of its citizenry.

§7.3.2. Applicability

A. Unless specifically exempt below, the provisions of this section shall apply to development within the Watershed Protection Overlay (WPO), as established in 0.

B. These regulations shall not be interpreted to interfere with any easement, covenant or other agreement 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. These requirements shall not apply to development existing as of January 1, 1994 (existing development) except as provided in 0, Nonconformities and shall not apply to single-family detached, zero lot line, or alley-loaded unit developed on an existing lot. Expansion of structures classified as existing development (on any lot other than a lot containing a single-family residential development as the principal use) must meet the requirements of this section; however, the impervious surface area of existing development is not required to be included in the density calculations. An example of how this is to be interpreted is as follows:

EXAMPLE A

Facts

1. Property in the WS-IV Protected Area
2. Low density option used
3. Total lot area = 65,000 sq. ft.
4. Existing impervious surface area of 14,000 sq. ft.
5. 51,000 sq. ft. Of undeveloped land

Development Capabilities

1. Existing development (i.e. 14,000 sq. ft. Not to be included in calculation)
2. Additional lot coverage permitted of up to 12,240 sq. ft.
   (51,000 sq. ft. X 24% maximum impervious surface area = 12,240 sq. ft.)

D. Nonconforming lots of record may be developed subject to the requirements of §10.6.

§7.3.3. Public Health Requirements

No activity, situation, structure or land use shall be allowed within the WPO district 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.

§7.3.4. Density and Impervious Surfaces Limitations

For the purpose of calculating impervious surface area, total project area shall include total acreage in the parcel on which the project is to be developed.

A. WS-II Watershed Areas -- Critical Area (WS-II-CA)

In order to maintain a predominately undeveloped land use intensity pattern, single-family residential uses shall be allowed at a maximum of one dwelling unit per two acres, or on lots having a minimum area of 80,000 square feet. All other residential and nonresidential development shall be allowed with a maximum 6 percent impervious surface area. No new permitted sites for land application of residuals or petroleum contaminated soils are allowed. No new landfills are allowed.

1. Permitted Uses

The following uses and activities are permitted provided such uses are also permitted in the underlying zoning district and providing that the restrictions stated herein are met:

(a) Agriculture, subject to the provisions of the Food Security Act of 1985 and the Food, Agricultural, Conservation and Trade Act of 1990; Agricultural activities conducted after January 1, 1993 shall maintain a minimum ten-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 maps or as determined by local government studies. Animal operations deemed permitted and permitted under 15A NCAC 2H .0217 are allowed. (NOTE: The Soil and Water Conservation Commission is the designated agency responsible for implementing the provisions of this section relating to agricultural activities.)

(b) Silviculture, using best management practices (bmps) required to implement the provisions of the Forest Practices Guidelines Related to Water Quality (15 NCAC 1I.6101-.0209).

(c) Residential development (single-family detached, zero lot line, alley loaded, two-family, multi-family development, and conservation residential subdivisions).

(d) Nonresidential uses, excluding discharging landfills and sludge application sites, mining and quarrying activities, and the storage of toxic and hazardous materials unless a spill containment plan is implemented.

2. Density and Impervious Surfaces

(a) Single-family Residential Development

Single-family residential development, and conservation residential subdivisions development shall not exceed one dwelling unit per two acres on a project-by-project basis; alternatively, lots having an area of at least 80,000 square feet (excluding road right-of-way) are allowed. Conservation residential subdivisions (see Article 2) shall also be allowed.

(b) All Other Residential and nonresidential

All other residential and nonresidential development shall not exceed six percent impervious surface area on a project-by-project basis. For the purpose of calculating impervious surface area, total project area shall include total acreage in the tract on which the project is to be developed.

B. WS-II Watershed Area -- Balance of Watershed (WS-II-BW)

In order to maintain a predominantly undeveloped land use intensity pattern, single-family residential development shall be allowed at a maximum of one dwelling unit per acre; alternatively, lots having an area of at least 40,000 square feet are allowed. All other residential and nonresidential development shall be allowed a maximum of 12 percent impervious surface area. In addition, nonresidential uses may occupy ten percent of the balance of the watershed which is outside the critical area with a 70 percent impervious surface area when approved as a special nonresidential intensity allocation (SNIA). The Board of Commissioners may approve snias consistent with the provisions of this section by speciall use permit (See §9.11). Non-discharging landfills and sludge application sites are allowed.

1. Permitted Uses

The following uses and activities are permitted provided such uses are also permitted in the underlying zoning district subject to the following:

(a) Agriculture subject to the provisions of the Food Security Act of 1985 and the Food, Agriculture, Conservation and Trade Act of 1990;

(b) Silviculture, subject to the provisions of the Forest Practices Guidelines Related to Water Quality (15 NCAC 1I.6101-.0209);

(c) Residential development (single-family detached, zero lot line, alley loaded, two-family, multi-family development, and conservation residential subdivision development); and

(d) Nonresidential development except no NPDES permits will be issued for landfills that discharge treated leachate.

2. Density and Impervious Surfaces

(a) Single-family Residential Development

Single-family residential development shall not exceed one dwelling unit per acre on a project-by-project basis; alternatively, lots having an area of at least 40,000 square feet (excluding road right-of-way) are allowed. Conservation residential subdivisions (see Article 2) shall also be allowed.

(b) All Other Residential and nonresidential

All other residential and nonresidential development shall not exceed 12 percent impervious surface area on a project-by-project basis. For the purpose of calculating impervious surface area, total project area shall include total acreage in the tract on which the project is to be developed.

C. WS-III Watershed Areas -- Balance of Watershed (WS-III-BW)

In order to maintain a low to moderate land use intensity pattern, single-family residential development shall be allowed at a maximum of two dwelling units per acre; alternatively, lots having an area of at least 20,000 square feet are allowed. All other residential and nonresidential developments shall be allowed a maximum of 24 percent impervious surface area on a project-by-project basis. In addition, nonresidential uses may occupy ten percent of the balance of the watershed outside the critical area (located within the jurisdiction of this UDO) with a 70 percent impervious surface area when approved as a special nonresidential intensity allocation (SNIA). The Board of Commissioners may approve snias consistent with the provisions of this subsection by special use permit (See §9.11). Non-discharging landfills and sludge application sites are allowed.

1. 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.

(b) Silviculture, subject to the provisions of the Forest Practices Guidelines Related to Water Quality (15 NCAC 1I.6101-.0209).

(c) Residential development (single-family detached, zero lot line, alley loaded, two-family, multi-family development, and conservation residential subdivisions); and

(d) Nonresidential development except no NPDES permits will be issued for landfills that discharge treated leachate.

2. Density and Impervious Surfaces

(a) Single-family and Two-family Residential

Single-family residential and two-family residential development shall not exceed two dwelling units per acre, as defined on a project-by-project basis. Alternatively, lots with a minimum area of 20,000 square feet (excluding road right-of-way) shall be allowed. Conservation residential subdivisions (see §7.3.6) shall also be allowed.

(b) All Other Residential and nonresidential

Development shall not exceed 24 percent impervious surface area on a project-by-project basis except that up to ten percent of the balance of the watershed located outside of the critical area and within the jurisdiction of the Ordinance may be approved for nonresidential uses to 70 percent impervious surface area on a project-by-project basis by special use permit (See §9.11). For the purpose of calculating impervious surface area, total project area shall include total acreage in the tract on which the project is to be developed. For expansions to existing development, the existing impervious surface area is not counted toward the maximum allowed 70 percent impervious surface area.

D. 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 UDO 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 dwelling units per acre (or 20,000 square foot lot, excluding road rights-of-way). All other residential and nonresidential development shall be allowed with a maximum impervious surface area of 24-50 percent depending on whether the low or high density option is used. The high density option shall only be allowed for use in the Catawba/Lake Norman Watershed. (See §7.3.9 for information on the high-density option.) No new sites for land application of residuals or petroleum contaminated soils are allowed. Landfills are specifically prohibited.

1. Permitted 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, 1993 shall maintain a minimum ten 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 maps or as determined by local government studies. Animal operations deemed permitted and permitted under 15A NCAC 2C .0217 are allowed.

Commentary: *The Soil and Water Conservation Commission is the designated agency responsible for implementing the provisions of this section relating to agricultural activities.*

(b) Silviculture, subject to the provisions of the Forest Practices Guidelines Related to Water Quality (15 NCAC 1I.6101-.0209).

(c) Residential development (single-family detached, zero lot line, alley loaded, two-family, multi-family development, and conservation residential subdivisions).

(d) Nonresidential development, excluding landfills, and sites for land application of sludge/residuals or petroleum contaminated soils.

2. Density and Impervious Surfaces

(a) Single-family and Two-family Residential

Single-family residential development, and conservation residential subdivisions development shall not exceed two dwelling units per acre on a project-by-project basis, or lots shall have an area of at least 20,000 square feet (excluding road right-of-way). Conservation developments (See §7.3.6) shall also be allowed.

(b) All Other Residential and nonresidential

Development shall not exceed 24 percent impervious surface area on a project-by-project basis if the low-density option is used and 50 percent impervious surface area if the high-density option is used. For the purpose of calculating the impervious surface area, total project area shall include total acreage in the tract on which the project is to be developed.

E. WS-IV Watershed Areas -- Protected Area (WS-IV-PA)

1. General

(a) 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 UDO when located in a WS-IV watershed. In order to address a moderate to high land use intensity pattern, single-family residential development shall be allowed at a maximum of two dwelling units per acre or 20,000 square foot lots, excluding road rights-of-way, when curb and gutter are provided or three dwelling units per acre when curb and gutter are not provided. All other residential and nonresidential development shall be allowed at a maximum of 24 percent impervious surface area on a project-by-project basis if the low-density option is used, or 36 percent for projects not having curb and gutter, and 70 percent impervious surface area on a project-by-project basis if the high-density option is used. The high density option may only be used in the Catawba/Lake Norman Watershed. Refer to Section 508 for more information on the high-density option.

(b) Notwithstanding the above, in the Catawba/Mountain Island Lake, Catawba/Hoyle Creek, Catawba/Lake Wylie, and Catawba/South Fork Catawba River watersheds only, ten percent of the area of each such watershed located in a WS-IV (PA) district may be developed with new nonresidential projects and expansions to existing nonresidential developments with up to 70 percent impervious surface area in addition to the new development otherwise allowed in this district.

2. Permitted Uses

Permitted uses include:

(a) Agriculture subject to the provisions of the Food Security Act of 1985 and the Food, Agriculture, Conservation and Trade Act of 1990;

(b) Silviculture, subject to the provisions of the Forest Practices Guidelines Related to Water Quality (15 NCAC 1I.6101-.0209);

(c) Residential development, limited to single-family detached, two-family, multi-family development, and conservation residential subdivisions; and

(d) Nonresidential development.

3. Density and Impervious Surface Limits

(a) Single-family and Two-family Residential

Single-family detached and two-family development and conservation residential subdivisions development shall not exceed two dwelling units per acre, on a project-by-project basis, or lots shall have an area of at least 20,000 square feet (excluding road right-of-way), when curb and gutter are provided; or three dwelling units per acre or lots shall have an area of at least 14,520 square feet (excluding road right-of-way) when curb and gutter are not provided. Conservation developments (See §7.3.6) are allowed.

(b) All Other Residential and nonresidential

Development shall not exceed 24 percent impervious surface area (with curb and gutter) or 36 percent impervious surface area (without curb and gutter) on a project-by-project basis if the low-density option is used. Irrespective of the use of curb and gutter, projects may have maximum impervious surface areas of 70 percent if the high density option is used. (NOTE: The high density option is only available in the Catawba/Lake Norman Watershed.) For the purpose of calculating impervious surface areas, total project area shall include total acreage in the tract on which the project is to be developed.

(c) Exception

Notwithstanding the above, up to ten percent of the area located within a Catawba/Mountain Island Lake, Catawba/Hoyle Creek, Catawba/Lake Wylie, and Catawba/South Fork Catawba River watersheds which has a WS-IV (PA) district, may be developed with new nonresidential projects and expansions to existing nonresidential developments with up to 70 percent impervious surface area in addition to the new development otherwise allowed in this district. For expansions to existing development, the existing impervious surface is not counted toward the allocated 70 percent built upon area.

§7.3.5. Interpretation of Watershed Area Boundaries

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 road, 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 lines, such lot lines shall be construed to be said boundaries.

C. Where the boundaries of a particular -WPO district lie at a scaled distance more than 25 feet from any adjoining lot line, the location of said WS district shall be determined by use of the scale appearing on the Watershed Map.

D. Where the boundaries of a -WPO district are located at a scaled distance of 25 feet or less from any adjoining lot line, the lot line may be used as said to be a "WS boundary".

E. Where other uncertainty exists, the Director shall interpret the Watershed Map as to location of such boundaries. This decision may be appealed to the Board of Adjustment in accordance with §9.19.

§7.3.6. Conservation Subdivision

Conservation residential subdivisions (see Article 2) are allowed in the –WPO district (all watershed areas) under the following conditions:

A. Maximum Density

The overall density of the project meets the associated density or stormwater control requirements under these rules. Maximum densities for residential uses shall not exceed that specified for the respective watershed areas (See §7.3.4) and summarized below:

Watershed Area	Maximum Density (Units/Acre)
WS-II-CA (Critical Area)	0.5
WS-II-BW (Balance of Watershed)	1.0
WS-III-BW (Balance of Watershed)	2.0
WS-IV-CA (Critical Area)	2.0
WS-IV-PA (Protected Area)	2.0, w/ curb and gutter 3.0, w/o curb and gutter

B. Other Requirements

1. Buffers must meet the minimum guidelines established in §7.3.7.
2. All impervious surfaces shall be designed and located to minimize stormwater runoff impact to the receiving waters and minimize concentrated stormwater flow.
3. Areas of concentrated density development are to be located in upland areas and away, to the maximum extent practicable, from surface waters and drainageways. Areas of concentrated density shall meet stormwater control requirements as described in §7.3.9, High Density Option.
4. The remainder of the tract not developed shall remain in a vegetated or natural state.
5. Conservation residential subdivision development shall transport stormwater runoff by vegetated conveyances to the maximum extent practicable.

§7.3.7. Buffer Required

A. A minimum 100 foot vegetative buffer is required for all new development activities that employ the high-density option; otherwise, a minimum 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 stream bank or shoreline stabilization is permitted.

B. No new development is allowed in said buffer except for water-borne structures (e.g., piers, docks, etc.) Or other structures such as flag poles, signs and security lights, which result in only de minimus increases in impervious area and public projects such as road crossings and greenways where no practical alternative exists. These activities should minimize impervious surface area, direct runoff away from the surface waters and maximize the utilization of stormwater Best Management Practices.

§7.3.8. Nonconformities

See §10.7.

§7.3.9. High Density Option

A. General Requirements

1. In any designated WS-IV watershed, any development (other than a single-family residential development) may occur using the high density option subject to approval by the Board of Commissioners under the rules and

guidelines herein outlined. The use of the high density option for any particular project may be approved by special use permit (See §9.11). Where deemed necessary by the Board of Commissioners, such applications may be submitted to the Division of Environmental Management's Water Quality Section for review and recommendation.

2. The use of the high density option for any single-family residential development shall be prohibited. Use of the high-density option within any WS-II or WS-III district shall also be prohibited.

B. High Density Options Development Standards

The Board of Commissioners may approve a project using the high density option (other than one for a single-family residential development) consistent with the following standards:

1. If the area proposed to be developed lies in a designated WS-IV Critical Area watershed, engineered stormwater controls shall be used to control runoff from the first inch of rainfall for development which contains a built-upon area of 24-50 percent.

2. If the area proposed to be developed lies in a designated WS-IV Protected Area watershed, engineered stormwater controls shall be used to control runoff from the first inch of rainfall for development which contains an impervious surface area of 24-70 percent (except that projects not using curb and gutter may be allowed to have built upon areas of up to 36 percent using the low-density option).

C. Inspection Fees

1. Inspection of all stormwater control structures will be conducted:

(a) Prior to the structure being placed into operation;

(b) Annually once the stormwater control structures have been approved by the County, and

(c) Any time after improvements, modifications or changes to said structures have been made by the owning entity.

2. A fee pursuant to §9.2.2.B, shall be required to be paid by the owning entity prior to each such inspection being conducted.

D. Operations and Maintenance Plan

1. Any stormwater control structure approved by the Board of Commissioners shall be predicated on the developer and the County entering into a binding operations and maintenance plan. Said plan shall require the owning entity of the structure(s) to maintain, repair, and, if necessary, reconstruct said structure(s) in accordance with the operation and maintenance plan provided by the developer to the County. Said plan must be approved by the Board of Commissioners prior to or in conjunction with approval of the high density option for said project.

2. A separate plan must be provided by the developer for each stormwater control structure, containing, at a minimum, what operation and maintenance actions are needed and will be undertaken, what specific quantitative criteria will be used for determining when those actions are to be taken, and who is

responsible for such actions. The Plan shall clearly indicate what steps will be taken for restoring a stormwater control structure to design specifications if a failure occurs.

3. Amendments to the Plan and/or specifications of the stormwater control structure(s) may only be approved by the Board of Commissioners. Proposed changes shall be prepared by a North Carolina registered professional engineer or landscape architect (to the extent that the General Statutes allow) and submitted to the County for approval. Such amendments shall be accompanied by all information and fees prescribed in §9.2.2.

4. If the Board of Commissioners finds that the Plan, once approved, is inadequate for any reason, the Director shall notify the owning entity of any changes mandated by the County and a time frame in which changes to the Plan shall be made.

E. Financial Guarantees

All new stormwater control structures approved employing the high density option shall be conditioned on the posting of adequate financial assurance for the purpose of constructing, maintaining, repairing or reconstructing said devices.

1. If the Board of Commissioners approves the use of the high density option for a particular project, it may do so only after the applicant has posted a surety bond, cash, or equivalent security, in an amount not less than 1.25 times the cost of constructing the necessary stormwater control structure(s). Such financial security shall be made payable to Lincoln County and shall be in a form prescribed by the Board of Commissioners. All construction costs shall be verified by the County and the County may assess the applicant for actual costs associated with such verification. The total cost of the stormwater control structure shall include the value of all materials such as piping and other structures, seeding and soil stabilization, design and engineering, grading, excavation, fill, and etc. The costs shall not be prorated as part of a larger project, but rather shall be priced as an individual project.

2. Once the stormwater control structure(s) has been constructed and inspected in the manner provided in §7.3.9.G, and approved by the Board of Commissioners, the Board of Commissioners may authorize the release of up to 75 percent of the surety bond or other equivalent device outlined in §7.3.9.E.1. The remaining portion of the surety bond or equivalent device may be released to the owning entity in accordance with §7.3.9.G.

3. Prior to said release, however, the applicant shall be required to deposit with the County either cash or similar instrument approved by the Board of Commissioners in an amount equal to 15 percent of the total construction cost (See §7.3.9.E) or 100 percent of the cost of maintaining, repairing or reconstructing said structure over a 20 year period, whichever is greater. The estimated cost of maintaining the stormwater control structure shall be consistent with the approved operation and maintenance plan provided by the applicant as outlined in §7.3.9.D.

F. Default

1. Upon default of the applicant to complete the stormwater control structure as spelled out in the performance bond or other equivalent security, the Board of

Commissioners may obtain and use all or any portion of the funds necessary to complete the improvements based on actual construction costs. The Board of Commissioners shall return any funds not spent in completing the improvements to the owning entity.

2. Upon default of the owning entity to maintain, repair and, if necessary, reconstruct the stormwater control structure in accordance with the approved operations and maintenance plan, the Board of Commissioners shall obtain and use any portion of the security outlined in §7.3.9.F to make necessary improvements based on the actual costs borne by the County to make such improvements.

G. Inspections

1. Inspections of Newly Constructed Stormwater Structures

All new stormwater control structures shall be inspected by the County after the owning entity notifies the Director that all construction has been completed. At this inspection the owning entity shall provide:

(a) A signed deed, related easements and survey plat for the structure in a manner suitable for filing with the Lincoln County Register of Deeds Office, if ownership of the stormwater control structure(s) is to be transferred to another person, firm, or entity. (This requirement will be waived for any repair work when such deed has previously been filed.)

(b) A certification by an engineer or landscape architect (to the extent allowable by the General Statutes) stating that the stormwater control structure is complete and consistent with the approved Plan and all specifications previously stipulated by the County.

(c) The Director shall forthwith present the materials submitted by the owning entity along with the County's inspection report to the Board of Commissioners for their review and approval. If the Board of Commissioners approves the inspection report and accepts the certification, deed and easements, the Director shall forthwith file said deed with the Lincoln County Register of Deeds Office. Release of up to 75 percent of the surety bond or equivalent security as called for in §7.3.9.E.1 shall be made in a manner as prescribed in §7.3.9.E.2. And §7.3.9.E.3.

(d) If deficiencies are found as a result of the inspection, the Board of Commissioners shall direct the owning entity to make necessary improvements. Reinspections will be made thereafter. No release of any funds shall be made by the County until all deficiencies are properly addressed to the County's satisfaction.

(e) No sooner than one year after approval of the stormwater control structure(s) by the County, the owning entity may petition the Board of Commissioners to release the remaining value of the posted bond or security called for in §7.3.9.E.1. Upon receipt of said petition, the County shall forthwith inspect the stormwater control structure to determine whether the structure is performing as designed and intended. Once the inspection is made, the Director shall forthwith present the inspection report and recommendations to the Board of Commissioners.

(f) An occupancy permit shall not be issued for any structure within the permitted development until the Board of Commissioners approves the stormwater control structure in the manner as herein prescribed.

2. Annual Inspection of Stormwater Structures

(a) All stormwater control structures shall be inspected by the County on an annual basis to determine whether the structures are performing as designed and intended. Records of inspection shall be maintained on forms approved or supplied by the North Carolina Department of Environment and Natural Resources (NCDENR). Annual inspections shall begin within one year of approval of the Board of Commissioner's approval of the filing date of the deed for the stormwater control structure. A fee, in accordance with a fee schedule adopted by the Board of Commissioners shall be charged to the owning entity for annual inspections (and re-inspections) made. A copy of each inspection report shall be filed with the Director.

(b) In the event the County's report indicates the need for corrective action or improvements, the Director shall notify the owning entity of the needed improvements and the date by which such improvements are to be completed. All improvements shall be consistent with the adopted operations plan and specifications. Once such improvements are made, the owning entity shall forthwith contact the Director and ask that an inspection be made.

H. Vegetation and Grounds Management

1. Landscaping and grounds management shall be the responsibility of the owning entity of said structure(s). However, vegetation shall be not established or allowed to mature to the extent that the integrity of the structure(s) is in any way threatened or diminished, or to the extent of interfering with any easement of access to the structure.

2. Except for routine landscaping and grounds maintenance, the owning entity shall notify the Director prior to any repair or reconstruction of the structure. All improvements shall be consistent with the approved Plan and specifications for that structure. After notification by the owning entity, County staff shall inspect the completed improvements and inform the owning entity of any required additions, changes, or modifications needed to complete said improvements. A time period for making such changes shall also be stipulated by the County. A fee, in accordance with a fee schedule adopted by the Board of Commissioners, shall be charged to the owning entity for each inspection (or re-inspection) made.

I. Stormwater Control Structure Specifications

1. All stormwater control structures shall be designed by either a North Carolina registered professional engineer or landscape architect (to the extent that the General Statutes allow).

2. Stormwater runoff shall be controlled through the use of Best Management Practices (bmps) that comply with the following standards:

(a) All structural stormwater treatment systems shall be designed to achieve a minimum of 85 percent average annual removal for Total Suspended Solids (TSS). Two or more bmps can be used in series to achieve this requirement.

(b) Stormwater management measures must comply with the General Engineering Design Criteria for all projects requirements listed in 15A NCAC 2H.1008(c).

(c) Stormwater management measures shall be designed to control and treat runoff from the first one-inch of rain.

(d) The discharge rate following a one-inch rainfall shall draw down the temporary storage volume between 48 and 120 hours.

Commentary: *Low Impact Development (LID) techniques are encouraged and may be used to assist in meeting the above stormwater requirements.*

3. The Design Manual includes a list of acceptable stormwater control measures, including specific design criteria for each stormwater practice.

4. If the specifications or guidelines of the Design Manual are more restrictive or apply a higher standard than other laws or regulations, that fact shall not prevent application of the specifications or guidelines in the Design Manual.

5. All land areas outside of any stormwater control structure shall be stabilized to restrain erosion within 21 calendar days after any land disturbance is complete. Upon completion of the stormwater control structure, a permanent ground cover shall be established and maintained as part of the maintenance agreement described in §7.3.9.D.

6. Should ownership (and maintenance) of the stormwater control structure be transferred to another person, firm, or entity, a description of the area containing the stormwater control structure shall be prepared and filed, consistent with §7.3.9.G.1(a) as a separate deed with the Lincoln County Register of Deeds Office along with any easements necessary for general access to the stormwater control structure. The deeded area shall include all stormwater control structures, pipes, berms, dikes, etc., and sufficient area to perform inspections, maintenance, repairs, and reconstruction.

7. The pervious portions of any stormwater control structure(s) approved by the Board of Commissioners shall not be included when computing impervious surface.

8. In addition to the required vegetative filters, all land areas outside of the pond shall be provided with ground cover sufficient to restrain erosion within 30 days after any land disturbance. Upon completion of the stormwater control structure, a permanent ground cover shall be established and maintained as part of the maintenance agreement described in §7.3.9.D.

9. A description of the area containing the stormwater control structure shall be prepared and filed, consistent with §7.3.9.G.1 as a separate deed, with the Lincoln County Register of Deeds Office along with any easements necessary for general access to the stormwater control structure, should ownership (and maintenance) of the stormwater control structure be transferred to another person, firm, or entity. The deeded area shall include the detention pond,

vegetative filters, all pipes and water control structures, berms, dikes, etc., and sufficient area to perform inspections, maintenance, repairs and reconstruction.

10. The pervious portions of any stormwater control structure(s) approved by the County Board of Commissioners shall not be included when computing impervious surface.

§7.3.10. Changes and Amendments

Under no circumstances shall the Board of Commissioners adopt such amendments, supplements, or changes that would cause this section to violate the Water Supply Watershed Protection Rules as adopted by the State. All amendments must be approved and filed with the State.

§7.4. Floodplain Protection

§7.4.1. Authorization

A. General

The Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143 and Chapter 160D-923 of the North Carolina General Statutes delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare. Therefore, the Board of Commissioners of Lincoln County, North Carolina, does ordain as follows:

B. Findings of Fact

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

2. These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities and by the occupancy in flood prone areas of uses vulnerable to floods or other hazards.

C. 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.

D. Objectives

The objectives of this section are to:

1. Protect human life, safety, and health;
2. Minimize expenditure of public money for costly flood control projects;
3. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
4. Minimize prolonged business losses and interruptions;
5. Minimize damage to public facilities and utilities (i.e. Water and gas mains, electric, telephone, cable and sewer lines, roads, and bridges) that are located in flood prone areas;
6. Help maintain a stable tax base by providing for the sound use and development of flood prone areas; and
7. Ensure that potential buyers are aware that property is in a Special Flood Hazard Area.

§7.4.2. Provisions for Flood Hazard Reduction

A. General Standards

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

1. All new construction and substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse, and lateral movement of the structure.
2. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
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 to the Regulatory Flood Protection Elevation. These include, but are not limited to, HVAC equipment, water softener units, bath/kitchen fixtures, ductwork, electric/gas meter panels/boxes, utility/cable boxes, 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. A structure or tank for chemical or fuel storage incidental to an allowed use or to the operation of a water treatment plant or wastewater treatment facility may be located in a Special Flood Hazard Area only if the structure or tank is either elevated or floodproofed to at least the regulatory flood protection elevation and certified in accordance with the provisions of §9.16.5.

11. All subdivision proposals and other development proposals shall be consistent with the need to minimize flood damage.

12. All subdivision proposals and other development proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.

13. All subdivision proposals and other development proposals shall have adequate drainage provided to reduce exposure to flood hazards.

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

15. When a structure is partially located in a special flood hazard area, the entire structure shall meet the requirements for new construction and substantial improvements.

16. When a structure is located in multiple flood hazard zones or in a flood hazard risk zone with multiple base flood elevations, the provisions for the more restrictive flood hazard risk zone and the highest base flood elevation shall apply.

B. Specific Standards

In all Special Flood Hazard Areas where Base Flood Elevation (BFE) data has been provided, as set forth in §9.16.2, Basis for Establishing, or §7.4.3, Standards for Floodplains without Established Base Flood Elevations, the following provisions, in addition to the provisions of §7.4.2.A, General Standards, 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 Article 12.

2. Nonresidential Construction

New construction and substantial improvement of any commercial, industrial, or other nonresidential structure shall have the reference level, including basement, elevated no lower than the regulatory flood protection elevation, as defined in Article 12. Structures located in A, AE, AO, 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. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the Director as set forth in §9.16.5, Certification Requirements, along with the operational and maintenance plans.

C. Manufactured Homes

1. New and replacement manufactured homes shall be elevated so that the reference level of the manufactured home is no lower than the regulatory flood protection elevation, as defined in Article 12.
2. Manufactured homes shall be securely anchored to an adequately anchored foundation to resist flotation, collapse, and lateral movement, either by certified engineered foundation system, or in accordance with the most current edition of the State of North Carolina Regulations for Manufactured Homes adopted by the Commissioner of Insurance pursuant to NCGS 143-143.15. Additionally, when the elevation would be met by an elevation of the chassis 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 36 inches in height, an engineering certification is required.
3. All enclosures or skirting below the lowest floor shall meet the requirements of §7.4.2.B, Specific Standards.
4. 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 Director and the local emergency management coordinator.

D. Elevated Buildings

Fully enclosed area, of new construction and substantially improved structures, which is below the lowest floor:

1. Shall not be designed or used for human habitation, but shall only be used for parking of vehicles,

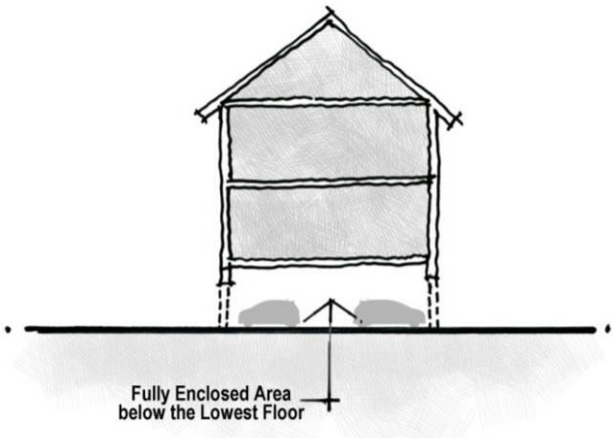

Figure 84. Elevated Buildings

building access, or limited storage of maintenance equipment used in connection with the premises;

(a) 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);

(b) The interior portion of such enclosed area shall not be finished or partitioned into separate rooms, except to enclose storage areas;

2. Shall be constructed entirely of flood resistant materials;

3. 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:

(a) A minimum of two flood openings on different sides of each enclosed area subject to flooding;

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

(c) If a building has more than one enclosed area, each enclosed area must have flood openings to allow floodwaters to automatically enter and exit;

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

(e) 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

(f) 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.

E. Additions/Improvements

1. 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:

(a) 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; or

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

2. 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.

3. 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:

   (a) Not a substantial improvement, the additions and/or improvements only must comply with the standards for new construction; or

   (b) A substantial improvement, both the existing structure and the additions and/or improvements must comply with the standards for new construction.

F. Recreational Vehicles

Recreational vehicles shall either:

1. 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

2. Meet all the requirements for new construction.

G. Temporary nonresidential Structures

Prior to the issuance of a floodplain development permit for a temporary structure, the applicant must submit to the Director 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 Director for review and written approval:

1. A specified time period for which the temporary use will be permitted. Time specified may not exceed three months, renewable up to one year;

2. The name, address, and phone number of the individual responsible for the removal of the temporary structure;

3. 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);

4. A copy of the contract or other suitable instrument with the entity responsible for physical removal of the structure; and

5. Designation, accompanied by documentation, of a location outside the Special Flood Hazard Area, to which the temporary structure will be moved.

H. Accessory Structures

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

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

   (b) Accessory structures shall not be temperature-controlled;

   (c) Accessory structures shall be designed to have low flood damage potential;

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

(e) Accessory structures shall be firmly anchored in accordance with the provisions of §7.4.2.A.1;

(f) All service facilities such as electrical shall be installed in accordance with the provisions of §7.4.2.A.4; and

(g) Flood openings to facilitate automatic equalization of hydrostatic flood forces shall be provided below regulatory flood protection elevation in conformance with the provisions of §7.4.2.D.

2. 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 §9.16.5.

§7.4.3. Standards for Floodplains without Established Base Flood Elevations

Within the Special Flood Hazard Areas designated as Approximate Zone A and established in §9.16.2, where no Base Flood Elevation (BFE) data has been provided by FEMA, the following provisions, in addition to the provisions of §7.4.2.A shall apply:

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

B. The BFE used in determining the regulatory flood protection elevation shall be determined based on the following criteria:

1. When Base Flood Elevation (BFE) data is available from other sources, all new construction and substantial improvements within such areas shall also comply with all applicable provisions of this section and shall be elevated or flood proofed in accordance with standards in §7.4.2.A and §7.4.2.B.

2. When floodway data is available from a Federal, State, or other source, all new construction and substantial improvements within floodway areas shall also comply with the requirements of §7.4.2.B and §7.4.2.F.

3. All subdivision, manufactured home parks and other development proposals shall provide Base Flood Elevation (BFE) data if development is greater than five acres or has more than fifty lots/manufactured home sites. Such Base Flood Elevation (BFE) data shall be adopted by reference in accordance with §9.16.2 and utilized in implementing this section.

4. When Base Flood Elevation (BFE) data is not available from a Federal, State, or other source as outlined above, the reference level shall be elevated or flood proofed (nonresidential) to or above the Regulatory Flood Protection Elevation, as defined in Article 12. All other applicable provisions of §7.4.2.B, Specific Standards, shall also apply.

§7.4.4. Standards for Riverine Floodplains with BFE but without Established Floodways or Non-encroachment Areas

Along rivers and streams where BFE data is provided by FEMA or is available from another source but neither floodway nor non-encroachment areas are identified for a

Special Flood Hazard Area on the FIRM or in the FIS report, the following requirements shall apply to all development within such areas:

A. Standards of §7.4.2.A and §7.4.2.B; and

B. 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.

§7.4.5. Floodways and Non-encroachment Areas

Areas designated as floodways or non-encroachment areas are located within the Special Flood Hazard Areas established in §9.16.2. 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 §7.4.2.A and §7.4.2.B, shall apply to all development within such areas:

A. No encroachments, including fill, new construction, substantial improvements and other developments shall be permitted unless:

1. It is demonstrated that the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood, based on hydrologic and hydraulic analyses performed in accordance with standard engineering practice and presented to the Director prior to issuance of floodplain development permit; or

2. 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.

B. If the requirements of subsection A, above, are satisfied, all development shall comply with all applicable flood hazard reduction provisions of this section.

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

1. Anchoring and the elevation standards of §7.4.2.C; and

2. No encroachment standard of subsection A, above.

§7.4.6. Legal Status Provisions

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

1. This section in part comes forward by re-enactment of some of the provisions of the flood damage prevention ordinance enacted December 7, 1981, as amended, and it is not the intention to repeal but rather to re-enact and continue to enforce without interruption of such existing provisions, so that all rights and liabilities that have accrued thereunder are reserved and may be enforced. The enactment of this section shall not affect any action, suit or proceeding instituted or pending.

2. The date of the initial flood damage prevention ordinance for each municipal jurisdiction within Lincoln County is as follows:

City of Lincolnton May 5, 1987

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 Director or his or her authorized agents before the time of passage of this section; provided that when construction is not begun under such outstanding permit within a period of six months subsequent to the date of issuance of the outstanding permit, construction or use shall be in conformity with the provisions of this section.

§7.5. Streamside Buffers

§7.5.1. General Provisions

A. Intent

The streamside buffer regulations contained herein are intended to limit exposure of perennial and intermittent streams to the cumulative and secondary impacts of development. These impacts include increased stormwater runoff from impervious surface areas, altered hydrographic conditions, nutrient loading and pesticide contamination from point and non-point sources.

B. Effect of Streamside Buffer Regulations

The streamside buffer regulations are applied in combination with zoning districts and have the effect of modifying the requirements, regulations and procedures applying in the applicable zoning district to the extent expressly indicated in this section. Whenever the provisions of any other ordinance, statute or agreement require more restrictive standards than are required in this section, the provisions of such ordinance, statute or agreement shall govern.

C. Applicability

1. Redevelopment of impervious surface areas of existing development is allowed if the rebuilding activity does not have a net increase in impervious surface area.

2. Single-family detached dwellings may be expanded, redeveloped or replaced in accordance with the other requirements of the UDO without being subject to the restrictions of this section.

3. Existing development as defined herein.

D. Prior Approvals

This section shall render no valid permitted structure or conforming use nonconforming. An existing structure may be rebuilt if damaged or destroyed even if the structure fails to conform to these regulations.

§7.5.2. Streamside Buffer Zones

A. A streamside buffer, consisting of an undisturbed vegetative cover, the width of the 100-year floodplain, as identified on the current Flood Insurance Rate Map (FIRM) published by FEMA, shall be established and maintained along all

indicated or identified perennial and intermittent waters. Where the floodplain width is less than 50 feet measured from the top of the stream bank or no flood plain exists, a minimum 50-foot streamside buffer is required along all indicated or identified perennial and intermittent waters. Streamside buffers shall be shown by metes and bounds on all appropriate plans and plats. For the 50-foot streamside buffer, the following shall be required and in no case shall disturbance exceed the following:

B. No development, including land-disturbing activities, shall occur within streamside buffers except as listed in §7.5.3 below.

1. Buffer Zone 1

Buffer Zone 1 shall be a minimum of 30 feet from the top of bank and shall remain undisturbed. No new development is permitted within the Buffer Zone 1 except for artificial stream bank or shoreline stabilization, water dependent structures and public or private projects such as road or utility crossings or installations of greenways where no practical alternatives exist. Activities within buffer areas shall minimize impervious coverage, direct runoff away from surface waters and maximize the utilization of stormwater best management practices.

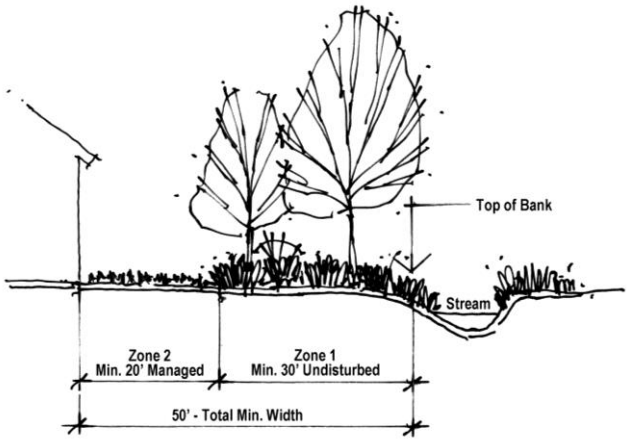

Figure 85. Streamside Buffer Zones

2. Buffer Zone 2

Buffer Zone 2 shall be a minimum of 20 feet extending landward from Buffer Zone 1. This buffer is an area of managed vegetation and shall be vegetated by grass, other ground cover or natural vegetation. Disturbance of existing vegetation shall be minimized to the greatest extent possible except for the installation of artificial stream bank or shoreline stabilization, water dependent structures and public or private projects such as utility service lines, road crossings or greenways where no practical alternatives exists.

§7.5.3. Limited Activity Permitted Within and Adjacent to Buffers

Except for the following limited activities, lands within and adjacent to buffer areas shall remain undisturbed.

A. Agriculture is subject to the provisions of the Food Security Act of 1985 and the Food, Agriculture, Conservation and Trade Act of 1990.

B. Agricultural activities must maintain a minimum 10-foot wide vegetated buffer, or equivalent control as determined by the Soil and Water Conservation Commission, along all perennial waters located within the critical area of water supply watersheds.

C. Animal operations greater than 100 animal units shall employ best management practice. The Soil and Water Conservation Commission is responsible for implementing these provisions pertaining to agricultural activities.

D. Silviculture activities shall be subject to the provisions of the Forest Practices Guidelines related to Water Quality (15A NCAC 01I .0101-0209). The North Carolina Division of Forest Resources is responsible for implementing these provisions pertaining to silviculture activities.

E. New nonresidential uses requiring an erosion/sedimentation control plan under local or State law shall incorporate adequately designed, constructed and maintained spill containment structures if hazardous materials are either used, stored or manufactured on the premises.

F. Road construction shall use bmps outlined in the North Carolina Department of Transportation document entitled, "Best Management Practices for the Protection of Surface Waters."

G. Diffuse flow of runoff shall be maintained in the riparian buffer by dispersing concentrated flow and reestablishing vegetation.

H. Vegetative cover shall be reestablished for all areas disturbed by land development activities on sites adjoining the buffer area and shall be maintained on a permanent basis.

I. Bmps shall not be constructed within jurisdictional waters.

J. Construction activities within jurisdictional waters shall require prior approval from the U.S. Army Corps of Engineers and/or the N.C. Division of Water Quality.

§7.5.4. Variances and Waivers

A. Applicants may seek variances from this section pursuant to §9.18, Variance.

B. Waivers may be approved by the Director, as follows:

1. Buffer widths may be averaged across the affected property. In no cases shall less than a 30 foot wide buffer be maintained.

2. Encroachment may be approved into the required buffer zones for the construction of a required public improvement including, water, sewer, and roadways when a finding of no practical alternative is made. In making this determination the Director or their appointed designee shall consider terrain, accessibility, system function, cost, safety, and timing.

§7.5.5. Revegetation

All disturbed areas within the streamside buffer area, permitted or not, shall be revegetated with perennial vegetation as soon as practical (immediately) after the disturbance. Any noncompliance shall be treated as a violation of this UDO and be subject to enforcement as described in Article 11, Enforcement and Penalties. Plant materials shall be limited to those on the approved plant species list, which is available in the Planning and Inspections Department.