**15A NCAC 02B .0624 WATER SUPPLY WATERSHED PROTECTION PROGRAM: NONPOINT SOURCE AND STORMWATER POLLUTION CONTROL**

This Rule sets forth requirements for projects that are subject to water supply watershed regulations.

(1) IMPLEMENTING AUTHORITY. The requirements of this Rule shall be implemented by local governments with land use authority in one or more designated water supply watersheds. State agencies shall also comply with this Rule insofar as required by G.S. 143-214.5 and in accordance with Rule .0622 of this Section.

(2) APPLICABILITY. This Rule shall apply to all new development projects, including state owned projects, that lie within a designated water supply watershed, except in a Class WS-IV watershed where this Rule applies only to new development projects that require an Erosion and Sedimentation Control Plan. Rule .0622 of this Section includes project types to which rules do not apply.

(3) PROJECT DENSITY. The following maximum allowable project densities and minimum lot sizes shall apply to a project according to the classification of the water supply watershed where it is located, its relative location in the watershed, its project density, and the type of development:

| Water Supply Classification | Location in the Watershed | Maximum Allowable Project Density or Minimum Lot Size | | |
|---|---|---|---|---|
| | | Low Density Development | | High Density Development |
| | | Single-family detached residential | Non-residential and all other residential | All types |
| WS-I | Not Applicable: Watershed shall remain undeveloped except for the following uses when they cannot be avoided: power transmission lines, restricted access roads, and structures associated with water withdrawal, treatment, and distribution of the WS-I water. Built-upon area shall be designed and located to minimize stormwater runoff impact to receiving waters. | | | |
| WS-II | Critical Area | 1 dwelling unit per 2 acres or 80,000 square foot lot excluding roadway right-of-way or 6% built-upon area | 6% built-upon area | 6 to 24% built-upon area |
| | Balance of Watershed | 1 dwelling unit per 1 acre or 40,000 square foot lot excluding roadway right-of-way or 12% built-upon area | 12% built-upon area | 12 to 30% built-upon area |
| WS-III | Critical Area | 1 dwelling unit per 1 acre or 40,000 square foot lot excluding roadway right-of-way or 12% built-upon area | 12% built-upon area | 12 to 30% built-upon area |
| | Balance of Watershed | 1 dwelling unit per one-half acre or 20,000 square foot lot excluding roadway right-of-way or 24% built-upon area | 24% built-upon area | 24 to 50% built-upon area |
| WS-IV | Critical Area | 2 dwelling units per acre or 20,000 | 24% built-upon area | 24 to 50% built-upon area |

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|---|---|---|---|---|
| | | square foot lot excluding roadway right-of-way or 24% built-upon area | | |
| | Protected Area | 2 dwelling units per acre or 20,000 square foot lot excluding roadway right-of-way or 24% built-upon; or 3 dwelling units per acre or 36% built-upon area without curb and gutter street system | 24% built-upon area; or 36% built-upon area without curb and gutter street system | 24 to 70% built-upon area |
| WS-V | Not Applicable | | | |

(4) CALCULATION OF PROJECT DENSITY. The following requirements shall apply to the calculation of project density:

(a) Project density shall be calculated as the total built-upon area divided by the total project area;

(b) A project with "existing development," as that term is defined in Rule .0621 of this Section, may use the calculation method in Sub-Item (a) of this Item or may calculate project density as the difference of total built-upon area minus existing built-upon area divided by the difference of total project area minus existing built-upon area. Expansions to existing development shall be subject to this Rule except as excluded in Rule .0622(1)(d) of this Section. Where there is a net increase of built-upon area, only the area of net increase shall be subject to this Rule. Where existing development is being replaced with new built-upon area, and there is a net increase of built-upon area, only the area of net increase shall be subject to this Rule;

(c) Total project area shall exclude the following:

(i) areas below the Normal High Water Line (NHWL); and

(ii) areas defined as "coastal wetlands" pursuant to 15A NCAC 07H .0205, herein incorporated by reference, including subsequent amendments and editions, and available at no cost at http://reports.oah.state.nc.us/ncac.asp, as measured landward from the NHWL; and

(d) Projects under a common plan of development shall be considered as a single project for purposes of density calculation except that on a case-by-case basis, local governments may allow projects to be considered to have both high and low density areas based on one or more of the following criteria:

(i) natural drainage area boundaries;

(ii) variations in land use throughout the project; or

(iii) construction phasing.

(5) LOW DENSITY PROJECTS. In addition to complying with the project density requirements of Item (3) of this Rule, low density projects shall comply with the following:

(a) VEGETATED CONVEYANCES. Stormwater runoff from the project shall be released to vegetated areas as dispersed flow or transported by vegetated conveyances to the maximum extent practicable. In determining whether this criteria has been met, the local government shall take into account site-specific factors such as topography and site layout as well as protection of water quality. Vegetated conveyances shall be maintained in perpetuity to ensure that they function as designed. Vegetated conveyances that meet the following criteria shall be deemed to satisfy the requirements of this Sub-Item:

(i) Side slopes shall be no steeper than 3:1 (horizontal to vertical) unless it is demonstrated to the local government that the soils and vegetation will remain stable in perpetuity based on engineering calculations and on-site soil investigation; and

(ii) The conveyance shall be designed so that it does not erode during the peak flow from the 10-year storm event as demonstrated by engineering calculations.

(b) CURB OUTLET SYSTEMS. In lieu of vegetated conveyances, low density projects shall have the option to use curb and gutter with outlets to convey stormwater to grassed swales or vegetated areas. Requirements for these curb outlet systems shall be as follows:

(i) The curb outlets shall be located such that the swale or vegetated area can carry the peak flow from the 10-year storm and at a non-erosive velocity;

(ii) The longitudinal slope of the swale or vegetated area shall not exceed five percent except where not practical due to physical constraints. In these cases, devices to slow the rate of runoff and encourage infiltration to reduce pollutant delivery shall be provided;

(iii) The swale's cross section shall be trapezoidal with a minimum bottom width of two feet;

(iv) The side slopes of the swale or vegetated area shall be no steeper than 3:1 (horizontal to vertical);

(v) The minimum length of the swale or vegetated area shall be 100 feet; and

(vi) Low density projects may use treatment swales designed in accordance with 15A NCAC 02H .1061 in lieu of the requirements specified in Sub-Items (i) through (v) of this Sub-Item.

(6) HIGH DENSITY PROJECTS. In addition to complying with the project density requirements of Item (3) of this Rule, high density projects shall comply with the following:

(a) SCMs shall be designed, constructed, and maintained so that the project achieves either "runoff treatment" or "runoff volume match" as those terms are defined in Rule .0621 of this Section;

(b) For high density projects designed to achieve runoff treatment, the required storm depth shall be one inch. Applicants shall have the option to design projects to achieve runoff volume match in lieu of runoff treatment;

(c) Stormwater runoff from off-site areas and "existing development," as that term is defined in Rule .0621 of this Section, shall not be required to be treated in the SCM. Runoff from off-site areas or existing development that is not bypassed shall be included in sizing of on-site SCMs;

(d) SCMs shall meet the relevant MDC set forth in 15A NCAC 02H .1050 through .1062; and

(e) Stormwater outlets shall be designed so that they do not cause erosion downslope of the discharge point during the peak flow from the 10-year storm event as shown by engineering calculations.

(7) OPTIONS FOR IMPLEMENTING PROJECT DENSITY. Local governments shall have the following options when developing or revising their ordinances in place of or in addition to the requirements of Item (3) of this Rule, as appropriate:

(a) Local governments may allow only low density development in their water supply watershed areas in accordance with this Section.

(b) Local governments may regulate low density single-family detached residential development using the minimum lot size requirements, dwelling unit per acre requirements, built-upon area percentages, or some combination of these.

(c) 10/70 OPTION. Outside of WS-I watersheds and the critical areas of WS-II, WS-III, and WS-IV watersheds, local governments may regulate new development under the "10/70 option" in accordance with the following requirements:

(i) A maximum of 10 percent of the land area of a water supply watershed outside of the critical area and within a local government's planning jurisdiction may be developed with new development projects and expansions of existing development of up to 70 percent built-upon area.

(ii) In water supply watersheds classified on or before August 3, 1992, the beginning amount of acreage available under this option shall be based on a local government's jurisdiction as delineated on July 1, 1993. In water supply watersheds classified after August 3, 1992, the beginning amount of acreage available under this option shall be based on a local government's jurisdiction as

delineated on the date the water supply watershed classification became effective. The acreage within the critical area shall not be counted towards the allowable 10/70 option acreage;

(iii) Projects that are covered under the 10/70 option shall comply with the low density requirements set forth in Item (5) of this Rule unless the local government allows high density development, in which case the local government may require these projects to comply with the high density requirements set forth in Item (6) of this Rule;

(iv) The maximum built-upon area allowed on any given new development project shall be 70 percent;

(v) A local government having jurisdiction within a designated water supply watershed may transfer, in whole or in part, its right to the 10/70 land area to another local government within the same water supply watershed upon submittal of a joint resolution and approval by the Commission; and

(vi) When the water supply watershed is composed of public lands, such as National Forest land, local governments may count the public land acreage within the watershed outside of the critical area in calculating the acreage allowed under this provision.

(d) New development shall meet the development requirements on a project-by-project basis except local governments may submit ordinances that use density or built-upon area criteria averaged throughout the local government's watershed jurisdiction instead of on a project-by-project basis within the watershed. Prior to approval of the ordinance, the local government shall demonstrate to the Commission that the provisions as averaged meet or exceed the statewide minimum requirements and that a mechanism exists to ensure the planned distribution of development potential throughout the local government's jurisdiction within the watershed.

(e) Local governments may administer oversight of future development activities in single-family detached residential developments that exceed the applicable low density requirements by tracking dwelling units rather than percentage built-upon area, as long as the SCM is sized to capture and treat runoff from all pervious and built-upon surfaces shown on the development plan and any off-site drainage from pervious and built-upon surfaces, and when an additional safety factor of 15 percent of built-upon area of the project site is figured in.

(8) CLUSTER DEVELOPMENT. Cluster development shall be allowed on a project-by-project basis as follows:

(a) Overall density of the project shall meet the requirements of Item (3) of this Rule;

(b) Vegetated setbacks shall meet the requirements of Item (11) of this Rule;

(c) Built-upon areas are designed and located to minimize stormwater runoff impact to receiving waters, minimize concentrated stormwater flow, maximize the use of sheet flow through vegetated areas, and maximize the flow length through vegetated areas;

(d) Areas of concentrated development shall be located in upland areas and away, to the maximum extent practicable, from surface waters and drainageways. In determining whether these criteria have been met, the local government shall take into account site-specific factors such as topography and site layout as well as protection of water quality;

(e) The remainder of tract shall remain in a vegetated or natural state;

(f) The area in the vegetated or natural state may be conveyed to a property owners association, a local government for preservation as a park or greenway, a conservation organization, or placed in a permanent conservation or farmland preservation easement;

(g) A maintenance agreement for the vegetated or natural area shall be filed with the Register of Deeds; and

(h) Cluster development that meets the applicable low density requirements shall comply with Item (5) of this Rule.

(9) DENSITY AVERAGING OF NONCONTIGUOUS PARCELS. Density averaging of two noncontiguous parcels for purposes of complying with this Rule shall be allowed in accordance with G.S. 143-214.5 (d2).

(10) RESPONSIBILITY FOR SCM OPERATION & MAINTENANCE. Operation and maintenance agreements and plans are required for SCMs in accordance with 15A NCAC 02H .1050. Local governments that allow high density development shall assume responsibility for operation and maintenance of the SCMs that they approve.

(11) VEGETATED SETBACKS. Vegetated setbacks shall be required along perennial waterbodies and perennial streams that are indicated on the most recent versions of the United States Geological Survey (USGS) 1:24,000 scale (7.5 minute) quadrangle topographic maps, which are herein incorporated by reference and are available at no cost at http://www.usgs.gov/pubprod/, or other maps developed by the Department or a local government and approved by the Commission. Where USGS topographic maps do not distinguish between perennial and intermittent streams, an on-site stream determination may be performed by an individual qualified to perform such stream determinations. A qualified individual is one who has been certified to perform stream determinations by completing and passing the Surface Water Identification Training and Certification (SWITC) Course offered by the North Carolina Division of Water Resources and North Carolina State University. Vegetated setbacks shall also be in accordance with the following:

(a) MINIMUM VEGETATION WIDTHS. The following minimum widths shall apply:

(i) low density projects – 30 feet;

(ii) high density projects – 100 feet;

(iii) projects covered under the 10/70 option – 100 feet; and

(iv) agricultural activities – 10 feet, or equivalent control as determined by the designated agency as set forth in Rule .0622 of this Section; and

(b) The width of a vegetated setback shall be measured horizontally from the normal pool elevation of impounded structures, from the top of bank of each side of streams or rivers, and from the mean high waterline of tidal waters, perpendicular to the shoreline;

(c) Vegetated setbacks may be cleared or graded, but shall be replanted and maintained in grass or other vegetation;

(d) No new built-upon area shall be allowed in the vegetated setback except for the following uses where it is not practical to locate the built-upon area elsewhere:

(i) publicly-funded linear projects such as roads, greenways, and sidewalks;

(ii) water dependent structures such as docks; and

(iii) minimal footprint uses such as poles, signs, utility appurtenances, and security lights.

Built-upon area associated with these uses shall be minimized and the channelization of stormwater runoff shall be avoided; and

(e) Artificial streambank and shoreline stabilization shall not be subject to the requirements of this Item.

(f) For minor variances to a vegetated setback requirement, the percent variation shall be calculated using the footprint of built upon area proposed to encroach within the vegetated setback divided by the total area of vegetated setback within the project.

(g) Non-family subdivisions that are exempt from local subdivision ordinances shall implement the requirements of this Item to the maximum extent practicable considering site-specific factors including technical and cost consideration as well as protection of water quality.

(12) VARIANCES. Variances to this Rule may be considered in accordance with Rule .0623 of this Section.

*History Note:* *Authority G.S. 143-214.1; 143-214.5; 143-215.3(a)(1);*
*Eff. March 1, 2019 (Portions of this Rule were previously codified in 15A NCAC 02B .0104 and 02B .0212 through .0218);*
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