

**Rule Topic:** Definition of Gravel for Stormwater Rules

**Rule Citation:** 15A NCAC 02H .1002 *Definitions*

**DENR Division:** Division of Energy, Mineral, and Land Resources (DEMLR)

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**Impact Summary:** State government: No  
Local government: Yes  
Substantial impact: No  
Federal government: No

**Authority:** G.S. 143-213; 143-214.1; 143-214.7; 143-215.1; 143-215.3(a)(1)

**Necessity:** The proposed rule revisions are necessary to 1) comply with recent changes to G.S. 143-214.7; 2) provide clarity to the regulated community on the implementation of stormwater rules as required by G.S. 143-214.7; and 3) replace a temporary rule that was adopted pursuant to G.S. 150B-21.1 and published in the North Carolina Register on April 15, 2014.

## I. Executive Summary

During the 2013 Regular Session of the 2013 North Carolina General Assembly, Session Law 2013-413 amended G.S. 143-214.7 to exclude “gravel” from the definition of “built-upon area.” This proposed rulemaking incorporates the amendments to G.S. 143-214.7 into Rule 15A NCAC 02H .1002. This proposed rulemaking also defines the term “gravel” and includes other changes that are technical in nature, such as renumbering and alphabetizing the definitions.

As measured from the baseline conditions as contained in Rule 15A NCAC 02H .1002, and without reference to either the temporary rule currently in effect or the recent revisions to G.S. 143-214.7, the fiscal analysis of the proposed rulemaking indicates that the estimated annual economic impacts would not meet or exceed the \$1,000,000 threshold for substantial economic impact as defined in the Administrative Procedures Act in G.S. 150B-21.4. The proposed rulemaking will have no economic impact on the State implementing agency (DEMLR) as it will neither require DEMLR to revise its existing procedures nor procure additional staff. The anticipated effective date of the proposed rulemaking is January 1, 2015 and prior to the expiration of the temporary rule on January 10, 2015.

## II. Purpose of Rules and Background

The purpose of this rule change is threefold. First, some of the proposed changes to Rule 15A NCAC 02H .1002 are necessary in order to align the Rule with recent changes to G.S. 143-214.7. Section 51.(d) of North Carolina Session Law 2013-413 amended G.S. 143-214.7 such that “gravel” was excluded from the definition of “built-upon area.” The proposed rulemaking incorporates the amendments to G.S. 143-214.7 into Rule 15A NCAC 02H .1002.

Second, the amendments to G.S. 143-214.7 excluded “gravel” from the definition of “built-upon area,” but they did not provide a definition of the term “gravel.” This proposed rulemaking defines the term “gravel” and includes other changes that are technical in nature, such as renumbering and alphabetizing the definitions. All of these changes provide clarity to the regulated community on the implementation of stormwater rules that are required by G.S. 143-214.7.

Third, the proposed rulemaking will replace a temporary rule that was adopted pursuant to G.S. 150B-21.1 and published in the North Carolina Register on April 15, 2014. The temporary rule will expire January 10, 2015 unless a permanent rule is adopted to replace it. The text, purpose, and justification of the proposed permanent rule are identical to those of the temporary rule.

The North Carolina Environmental Management Commission (EMC) promulgates rules and oversees state and federal programs to control the water quality impacts of stormwater runoff from development activities. The proposed changes to Rule 15A NCAC 02H .1002 will be incorporated into all of the EMC’s stormwater programs which are designed to protect High Quality Waters, Outstanding Resource Waters, Nutrient Sensitive Waters, Coastal Waters, Water Supply Watersheds, and waters in areas adjacent to municipalities with NPDES Phase II MS4 permits. These stormwater programs are administered either on the state level by the Division of Energy, Mineral, and Land Resources (DEMLR) and the Division of Water Resources (DWR) or on the local level by municipalities and counties.

## III. Costs

### A. Regulated Parties

#### (i.) Development Community

The proposed rule will not require members of the development community to deviate from current stormwater practices; as such, there will be neither a direct cost nor opportunity cost associated with new development, existing development, or redevelopment activities as a result of the proposed rule change.

#### (ii.) Local governments

The proposed rule will not require local governments who administer stormwater programs to deviate from current practices; as such, there will be

neither a direct cost nor opportunity cost for local governments as a result of the proposed rule change. Local governments may, at their discretion, choose to revise their local ordinances to match the State’s definitions of “built-upon area” and “gravel,” but they would not be required to do so as long as their ordinances continue to be at least as stringent as the State’s rules.

## **B. Implementing Agencies**

The proposed rulemaking will have no cost to the State implementing agency (DEMLR). This rulemaking only provides clarification of existing rules that are already being fully implemented by DEMLR. These amendments will not require DEMLR to revise its existing procedures nor will they require DEMLR to procure additional staff. Therefore, this proposed rulemaking will have no economic impact to the implementing agency.

## **C. Environment**

As measured from the baseline conditions as contained in Rule 15A NCAC 02H .1002, and without reference to either the temporary rule currently in effect or the recent revisions to G.S. 143-214.7, the proposed rulemaking will maintain existing environmental protections at a nearly equivalent level. The proposed rule does represent a slight relaxation of the current rule in that it would allow gravel that is used in place of other aggregate materials or traditional paving materials to be considered pervious for purposes of calculating “built-upon area” in development projects. “Built-upon area” is a factor in determining whether a development project is required to install stormwater control measures. It is also a factor in determining the design and size of the stormwater control measures. If a development project’s stormwater control measures are designed based on the premise that gravel is not built-upon area, then there could be some instances when these measures are undersized for the volume of stormwater they will receive. Measures that are undersized may be overwhelmed or bypassed, releasing untreated stormwater runoff into waterways which could result in degraded water quality. The likelihood of such a scenario is very small given the assumption that professional engineers value their credentials and will therefore design stormwater measures that are sized in accordance with sound engineering practices.

In addition, it is expected that gravel used on its own will not be suitable for the types of applications that are most likely to result in increased stormwater runoff such as areas subject to heavy vehicular traffic. The types of gravel captured under the proposed definition are most suited to drainage or decorative landscaping applications, which are uses that are already considered pervious. Aggregate materials which are used as a top layer over a highly-compacted or impervious material or as part of a mixture to be used for roads, for example, would not meet the proposed definition of gravel and would be considered built-upon area.

For these reasons, there should be minimal cost to the environment associated with this rulemaking.

## IV. Benefits

### A. Regulated Community

The proposed rulemaking will provide clarity as to what constitutes “gravel” thereby making the rule easier to understand. This should translate into less time spent by applicants on the permit application process as well as less time spent by DEMLR staff providing technical assistance. The amount of time saved will be inconsequential and will not represent a significant financial benefit; however, it is noted here for completeness.

In addition, there may be a benefit to members of the development community in that if gravel, as defined in this rule, is used in place of other types of aggregate or paving materials, additional impervious surfaces could be allowed on a development site that would otherwise be limited in certain regulated areas. In some cases, this could also mean that a development would remain under a density threshold and would therefore be exempt from stormwater treatment requirements. This could lead to an average cost saving per site of about \$54,000<sup>1</sup> for in capital cost of installing stormwater control measures, plus savings related to annual operation and maintenance costs. While this benefit may occur, it is expected that very few developments would benefit in this way since the types of gravel captured under the proposed definition are most appropriate for drainage or decorative landscaping which are uses that are already considered pervious. Aggregate materials that are used as a top layer over a highly-compacted or impervious material or as part of a mixture to be used for roads, for example, would not meet the proposed definition of gravel and would be considered impervious.

The use of aggregate materials, including gravel, is ubiquitous across the state. It is used in all types of development including commercial, industrial, residential, and recreational, on properties of all sizes and values, and for many different purposes. We have no data to suggest that gravel is favored more or less in any particular area or areas of the state. Similarly, we have no data on the popularity of gravel versus other aggregate materials. As such, we have no data on which to base a more detailed analysis of the possible benefits of the rule to the development community. We can report that of the 54 new state stormwater permit applications received by DEMLR since the temporary rule went into effect, only three have proposed to use gravel as that term is defined in the temporary rule and in this proposed permanent rule.

### B. Environment

The primary purpose of the EMC’s stormwater rules is to protect the surface waters of North Carolina from pollution caused by stormwater runoff. As measured from the baseline conditions as contained in Rule 15A NCAC 02H .1002, and without reference to either the temporary rule currently in effect or the recent revisions to G.S. 143-214.7, the proposed

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<sup>1</sup> See more details on the costs of various stormwater control measures on page 58 of the fiscal note the DENR Division of Water Quality prepared for the Falls Lake Nutrient Management Strategy rulemaking in 2010 available at the following link. [http://www.osbm.state.nc.us/files/pdf\\_files/DENR06082010\\_v2.pdf](http://www.osbm.state.nc.us/files/pdf_files/DENR06082010_v2.pdf)

rulemaking will maintain existing environmental protections at a nearly equivalent level with no benefit to the environment.

#### **V. Total Costs and Benefits**

The economic impacts of the proposed rulemaking, both in terms of cost and benefit, are negligible as measured from the baseline conditions. Consequently, there were no specific cost or benefit estimations to report in this fiscal note. The fiscal analysis indicates that the estimated total annual economic impacts would be significantly less than \$1,000,000 for the foreseeable future.

## Appendix

15A NCAC 2H .1002 is proposed for amendment as follows:

### 15A NCAC 02H .1002 DEFINITIONS

The definition of any word or phrase in this Section shall be the same as given in Article 21, Chapter 143 of the General Statutes of North Carolina, as amended. Other words and phrases used in this Section are defined as follows:

- (1) "Built-upon Area" means ~~that portion of a development project that is covered by~~ impervious surface ~~or~~ and partially impervious surface ~~including, but not limited to, buildings; pavement to the extent that the partially impervious surface does not allow water to infiltrate through the surface and gravel areas such as roads, parking lots, and paths; and recreation facilities such as tennis courts into the subsoil.~~ "Built-upon ~~"Built-upon~~ area" does not include a wooden slatted deck, the water area of a swimming pool, or ~~pervious or partially pervious paving material to the extent that the paving material absorbs water or allows water to infiltrate through the paving material.~~ gravel.
- (2) "CAMA Major Development Permits" mean those permits or revised permits required by the Coastal Resources Commission ~~according to~~ as set forth in 15A NCAC ~~7J-07J~~ Sections .0100 and .0200.
- (3) "Certificate of Stormwater Compliance" means the approval for activities that meet the requirements for coverage under a stormwater general permit for development activities that are regulated by this Section.
- (4) "Coastal Counties" ~~include~~ are Beaufort, Bertie, Brunswick, Camden, Carteret, Chowan, Craven, Currituck, Dare, Gates, Hertford, Hyde, New Hanover, Onslow, Pamlico, Pasquotank, Pender, Perquimans, Tyrrell, and Washington.
- (5) "Curb Outlet System" means curb and gutter installed in a development which meets low density criteria ~~{Rule set forth in Rule .1003(d)(1) of this Section}~~ Section with breaks in the curb or other outlets used to convey stormwater runoff to grassed swales or vegetated or natural areas and designed in accordance with Rule .1008(g) of this Section.
- (6) "Development" means any land disturbing activity that increases the amount of built-upon area or that otherwise decreases the infiltration of precipitation into the soil.
- (7) "Drainage Area or Watershed" means the entire area contributing surface runoff to a single point.
- (8) "Forebay" means a device located at the head of a wet detention pond to capture incoming sediment before it reaches the main portion of the pond. The forebay is typically an excavated settling basin or a section separated by a low weir.

- (9) "General Permit" means a ~~permit~~permit issued under G.S. 143-215.1(b)(3) and (4) authorizing a category of similar activities or discharges.
- (10) "Gravel" means a clean or washed, loose, uniformly-graded aggregate of stones from a lower limit of 0.08 inches to an upper limit of 3.0 inches in size.
- ~~(10)~~(11) "Infiltration Systems" mean stormwater control systems designed to allow runoff to pass or move (infiltrate/exfiltrate) into the soil.
- ~~(11)~~(12) "Notice of Intent" means a written notification to the Division that an activity or discharge is intended to be covered by a general permit and takes the place of ~~the "application"~~ application used with individual permits.
- ~~(12)~~(13) "Off-site Stormwater Systems" mean stormwater management systems that are located outside the boundaries of the specific project in question, but designed to control stormwater drainage from that project and other potential development sites. These systems shall designate responsible parties for operation and maintenance and may be owned and operated as a duly licensed utility or by a local government.
- ~~(24)~~(14) "One-year, 24-hour storm" means a rainfall of an intensity expected to be equaled or exceeded, on average, once in 12 months and with a duration of 24 hours.
- ~~(13)~~(15) "On-site Stormwater Systems" mean the systems necessary to control stormwater within an individual development project and located within the project boundaries.
- ~~(26)~~(16) "Permeable pavement" means paving material that absorbs water or allows water to infiltrate through the paving material. Permeable pavement materials include porous concrete, permeable interlocking concrete pavers, concrete grid pavers, porous asphalt, and any other material with similar characteristics. ~~Compacted gravel shall not be considered permeable pavement.~~
- ~~(14)~~(17) "Redevelopment" means any land disturbing activity that does not result in a net increase in built-upon area and that provides greater or equal stormwater control than the previous ~~development~~ development. ~~(stormwater~~ Stormwater controls shall not be allowed where otherwise ~~prohibited~~)-prohibited.
- ~~(27)~~(18) "Residential development activities" has the same meaning as in 15A NCAC 02B .0202(54).
- ~~(15)~~(19) "Seasonal High Water Table" means the highest level that groundwater, at atmospheric pressure, reaches in the soil in most years. The seasonal high water table is usually detected by the mottling of the soil that results from mineral leaching.
- ~~(16)~~(20) "Sedimentation/Erosion Control Plan" means any plan, amended plan or revision to an approved plan submitted to the Division of Energy, Mineral, and Land Resources or delegated authority in accordance with G.S. 113A-57.
- ~~(17)~~(21) "Stormwater" is defined in G.S. ~~143, Article 21, 143-213(16a)~~.
- ~~(18)~~(22) "Stormwater Collection System" means any conduit, pipe, channel, curb or gutter for the primary purpose of transporting (not treating) runoff. A stormwater collection system does not include vegetated swales, swales stabilized with armoring or alternative methods where natural

topography or other physical constraints prevents the use of vegetated swales (subject to case-by-case review), curb outlet systems, or pipes used to carry drainage underneath built-upon surfaces that are associated with development controlled by the provisions of Rule .1003(d)(1) in this Section.

~~(19)~~(23) "10 Year Storm" means the surface runoff resulting from a rainfall of an intensity expected to be equaled or exceeded, on the average, once in 10 years, and of a duration which will produce the maximum peak rate of runoff, for the watershed of interest under average antecedent wetness conditions.

~~(22)~~(24) "Vegetative Buffer" means an area of natural or established vegetation directly adjacent to surface waters through which stormwater runoff flows in a diffuse manner to protect surface waters from degradation due to development activities. The width of the buffer is measured horizontally from the normal pool elevation of impounded structures, from the bank of each side of streams or rivers, and from the mean high water line of tidal waters, perpendicular to the shoreline.

~~(25)~~ — "BMP" means ~~Best Management Practice~~.

~~(28)~~(25) "Vegetative conveyance" means a permanent, designed waterway lined with vegetation that is used to convey stormwater runoff at a non-erosive velocity within or away from a developed area.

~~(23)~~(26) "Vegetative Filter" means an area of natural or planted vegetation through which stormwater runoff flows in a diffuse manner so that runoff does not become channelized and which provides for control of stormwater runoff through infiltration of runoff and filtering of pollutants. The defined length of the filter shall be provided for in the direction of stormwater flow.

~~(20)~~(27) "Water Dependent Structures" means a structure for which the use requires access or proximity to or siting within surface waters to fulfill its basic purpose, such as boat ramps, boat houses, docks, and bulkheads. Ancillary facilities such as restaurants, outlets for boat supplies, parking lots and boat storage areas are not water dependent uses.

~~(21)~~(28) "Wet Detention Pond" means a structure that provides for the storage and control of runoff and includes a designed and maintained permanent pool volume.

*History Note:* Authority G.S. 143-213; 143-214.1; 143-214.7; 143-215.3(a)(1);  
Eff. January 1, 1988;  
Temporary Amendment Eff. March 28, 2014; Amended Eff. August 1, 2012 (see S.L. 2012-143, s.1.(f)); July 3, 2012; December 1, 1995; September 1, 1995.