

## 15A NCAC 13B .0837 LOCATION OF SEPTAGE LAND APPLICATION SITES

(a) Soil characteristics (Morphology) which shall be evaluated are as follows:

- (1) Texture – The relative proportions of the sand, silt, and clay sized mineral particles in the fine-earth fraction of the soil are referred to as soil texture. The texture of the different horizons of soils shall be classified into three general groups and 12 soil textural classes based upon the relative proportions of sand, silt, and clay sized mineral particles.
  - (A) Soil Group I – Sandy Texture Soils: The sandy group includes the sand and loamy sand textural classes.
  - (B) Soil Group II – Coarse Loamy and Fine Loamy Texture Soils: The coarse loamy and fine loamy group includes sandy loam, loam, silt, silt loam, sandy clay loam, clay loam, and silty clay loam textural classes.
  - (C) Soil Group III – Clayey Texture Soils: The clayey group includes sandy clay, silty clay, and clay textural classes.
- (2) The soil textural class shall be determined in the field by hand texturing samples of each soil horizon in the soil profile using the following criteria:
  - (A) Sand: Sand has a gritty feel, does not stain the fingers, and does not form a ribbon or ball when wet or moist;
  - (B) Loamy Sand: Loamy sand has a gritty feel, stains the fingers, forms a weak ball, and cannot be handled without breaking;
  - (C) Sandy Loam: Sandy loam has a gritty feel and forms a ball that can be picked up with the fingers and handled with care without breaking;
  - (D) Loam: Loam may have a slightly gritty feel but does not show a fingerprint and forms only short ribbons of from 0.25 inch to 0.50 inch in length. Loam will form a ball that can be handled without breaking;
  - (E) Silt Loam: Silt loam has a floury feel when moist and will show a fingerprint but will not ribbon and forms only a weak ball;
  - (F) Silt: Silt has a floury feel when moist and sticky when wet but will not ribbon and forms a ball that will tolerate some handling;
  - (G) Sandy Clay Loam: Sandy clay loam has a gritty feel but contains enough clay to form a firm ball and may ribbon to form 0.75 inch to one-inch long pieces;
  - (H) Silty Clay Loam: Silty clay loam is sticky when moist and will ribbon from one to two inches. Rubbing silty clay loam with the thumbnail produces a moderate sheen. Silty clay loam produces a distinct fingerprint;
  - (I) Clay Loam: Clay loam is sticky when moist. Clay loam forms a thin ribbon of one to two inches in length and produces a slight sheen when rubbed with the thumbnail. Clay loam produces a nondistinct fingerprint;
  - (J) Sandy Clay: Sandy clay is plastic, gritty and sticky when moist and forms a firm ball and produces a thin ribbon to over two inches in length;
  - (K) Silty Clay: Silty clay is both plastic and sticky when moist and lacks gritty feeling. Silty clay forms a ball and readily ribbons to over two inches in length;
  - (L) Clay: Clay is both sticky and plastic when moist, produces a thin ribbon over two inches in length, produces a high sheen when rubbed with the thumbnail, and forms a strong ball resistant to breaking;
  - (M) The Division may substitute laboratory determination of the soil textural class as defined in this Section by particle-size analysis of the fine-earth fraction (less than 2.0 mm in size) using the sand, silt and clay particle sizes as defined in this Section for field testing when conducted in accordance with ASTM (American Society for Testing and Materials) D-422 procedures for sieve and hydrometer analysis. For fine loam and clayey soils (Group II and III) the dispersion time shall be increased to 12 hours.
- (3) Wetness Condition:
  - (A) Soil wetness conditions caused by a seasonal high-water table, perched water table, tidal water, or seasonally saturated soils shall be determined by observation of common soil mottles of colors of chroma 2 or less, using the Munsell color chart, in mottle or a solid mass. If drainage modifications have been made, the soil wetness conditions may be determined by direct observation of the water surface in monitoring wells during periods of typically high

water elevations. However, colors of chroma 2 or less which are relic from minerals of the parent material shall not be considered indicative of a soil wetness condition.

- (B) Soils which do not meet the required depths to a soil wetness condition shall be considered unsuitable and septage shall not be applied, unless the required separation distances can be maintained. Water table monitoring wells may be utilized to determine the actual depth to a soil wetness condition. The Division may limit discharges to certain months where soil wetness conditions are marginal for use.
  - (C) The required depth to a soil wetness condition is determined by the Soil Group Textural Classification.
- (4) Soil Group I soil shall be considered suitable where soil wetness conditions are deeper than 36 inches below the point of septage application or incorporation.
  - (5) Soil Group II soils shall be considered suitable where soil wetness conditions are deeper than 24 inches below the point of septage application or incorporation.
  - (6) Soil Group III soils shall be considered suitable where soil wetness conditions are deeper than 18 inches below the point of septage application or incorporation.
  - (7) Depth to rock: soil depth shall be considered suitable where depth to rock is deeper than 24 inches below the point of septage application or incorporation or deeper than 18 inches if the septage is pretreated to accomplish pathogen reduction and surface applied over vegetation.
  - (8) Mine reclamation sites will be considered on a case by case basis.
- (b) Septage land application sites shall not be located in the watershed of a Class WS-I stream. New septage land application sites shall not be located in the water quality critical area of Class WS-II, WS-III, or WS-IV streams or reservoirs. This prohibition does not apply to those portions of a water supply watershed which are drained by Class B or Class C streams.
- (c) Setbacks. At the time of initial permitting, septage land application sites shall observe the minimum setback distances specified in this Rule. Minimum setbacks shall be maintained throughout the life of the site only on land owned, operated or controlled by the permittee or by the landowner(s) at the time of initial permitting. Any sale, lease or other conveyance of land by the permittee, or by the landowner(s) if different from the permittee, subsequent to the initial permitting of the site shall include restrictions to ensure continued maintenance of the setbacks. Failure to maintain required setbacks shall result in immediate permit revocation.
- (d) All septage disposal sites shall be located at least the minimum distance specified for the following:
- (1) Residence not occupied by the applicant – 500 feet, residence occupied by the applicant 100 – feet;
  - (2) Place of business, other than the septage management firm office, or place of public assembly – 500 feet;
  - (3) Well or spring – 500 feet;
  - (4) Surface waters. Stream classification shall be determined in accordance with 15A NCAC 02B .0301 through .0317 Assignment of Stream Classifications;
  - (5) Fresh waters:
    - (A) Class WS-I, Class WS-II, or Class WS-III streams – 300 feet;
    - (B) Class B stream – 300 feet;
    - (C) Class C stream – 200 feet; and
    - (D) Other streams and bodies of water – 200 feet;
  - (6) Tidal salt waters:
    - (A) Class SA or Class SB – 300 feet from mean high water mark; and
    - (B) Class SC and other coastal waters – 200 feet from mean high water mark.
  - (7) Supplemental classifications:
    - (A) Trout waters and swim waters – 200 feet; and
    - (B) Nutrient sensitive waters and outstanding resource waters – 300 feet.
  - (8) Groundwater lowering ditches and devices – 100 feet;
  - (9) Adjoining property under separate ownership or control – 50 feet;
  - (10) Public road right of ways – 100 feet;
  - (11) Food crops – 50 feet;
  - (12) Wetlands – 50 feet;
  - (13) Woods line – five feet, unless greater distance is required as part of an erosion and runoff control plan;
  - (14) Land application site on the same tract of land, permitted to a different operator – 100 feet; and

- (15) Setbacks in Subparagraphs (d)(3), (4), (5), (6), (7), and (8) of this Rule may be reduced 50 percent when septage is pretreated to accomplish pathogen reduction and when the land within the setback area is in permanent, established grass with at least 95 percent cover or when the setback area is in forest with a continuous canopy and a 95 percent forest litter cover. Accurate property line locations are the responsibility of the site operator.
- (e) Septage land application sites less than five acres in size, individual fields of a site less than two acres in size, and sites with complex soil patterns or unusual shapes shall be permitted only if the applicant demonstrates to the Division that the site can be properly managed for crop production and that septage can be evenly distributed over the site.
- (f) Septage land application sites shall not be located where the slope of the land is greater than 12 percent unless all of the conditions of this Paragraph are met:
- (1) The site is in permanent, established grass with at least 95 percent cover or is in forest with a continuous canopy and a 95 percent forest litter cover;
  - (2) Plans submitted to the Division are prepared in accordance with accepted erosion and runoff control practices and indicate the following:
    - (A) Management practices and discharge methods which will be used to reduce the potential for run-off from the site and assure even septage distribution over the site; and
    - (B) Location of potential surface water monitoring devices upslope and downslope from the area proposed to be permitted and identification of sampling methods. Monitoring may be required.
  - (3) Setbacks will be increased and application rates decreased as appropriate to protect any nearby surface waters which are to be approved by the Division; and
  - (4) No site shall include slopes in excess of 25 percent.
- (g) A new septage land application site shall not jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of a critical habitat, protected under the Federal Endangered Species Act of 1973. Agricultural land shall not be considered potential habitat.
- (h) Septage, or any part of septage, as defined in G.S. 130A-290, treated to meet the standard for Class A sewage sludge in accordance with the federal regulations for pathogen reduction and vector attraction reduction in 40 CFR Part 503, Subpart D, may be permitted by the Division for application to a public contact site, home lawns and gardens, or to be sold or given away in a bag or other container, provided it can be demonstrated that pollutant limits in 40 CFR 503.13(b)(1) Table 3 are not exceeded. Persons who prepare the septage, and persons who derive material from the septage, shall comply with the applicable record keeping requirements in 40 CFR 503.17(a) (1), (2) or (6). Treatment verification, acceptable to the Division, shall be available. All treatment methods and facilities shall obtain a permit from the Division in accordance with Rule .0836.

*History Note: Authority G.S. 130A-291.1;  
Eff. October 1, 2009.*