

#### **15A NCAC 13B .0841 STANDARDS FOR SEPTAGE DETENTION AND TREATMENT FACILITIES**

- (a) Septage detention facilities, used to meet the requirements of Rule .0838 (a)(20) or (21) of this Section, shall have a minimum size equal to the average volume of septage pumped per week. This does not limit the maximum capacity of a septage detention facility. Capacity shall be increased if it is demonstrated during site operation that this volume is inadequate or if specific site considerations would warrant such increases.
- (b) Septage detention facilities for sites permitted to land apply in excess of 50,000 gallons per acre per year shall have a minimum size equal to two percent of the maximum annual application rate. Facilities permitted as of the effective date of this rule shall have 12 months to meet this requirement.
- (c) Septage treatment and detention facility containers shall be structurally sound and constructed of steel, concrete, or fiberglass. If required by G.S. 89C, plans and specifications for proposed containers constructed of materials not specifically addressed in this Rule shall be prepared by a professional engineer. [Note: The North Carolina Board of Examiners for Engineers and Surveyors, has determined, via letter and resolution dated March 7, 2010, that certification of documents pursuant to this Paragraph constitutes practicing engineering, under G.S. 89C.]
- (d) A septage Treatment and Detention Facility permit holder and operator are responsible for the actions of any septage management firm that uses the detention or treatment facility.
- (e) Each detention and treatment facility shall be designed, constructed, and maintained in such a manner as to:
- (1) Prevent leaks or the flow of septage out of the facility into the seasonally high water table, onto the ground surface, or into any surface waters;
  - (2) Minimize the attraction or admittance of vectors; and
  - (3) Prevent unauthorized entry into septage containers or lagoons.
- (f) Septage detention and treatment facilities located below grade shall:
- (1) If required by G.S. 89C, a professional engineer shall certify that the construction was completed in substantial compliance with the plans and specifications prior to any waste being introduced into the system. [Note: The North Carolina Board of Examiners for Engineers and Surveyors, has determined, via letter and resolution dated March 11, 2010, that certification of documents pursuant to this Paragraph constitutes practicing engineering, under G.S. 89C.];
  - (2) Be constructed to a traffic rated standard or protected from vehicular traffic; and
  - (3) Not be constructed of used metal tanks. Used metal tanks are allowed to be located beside a wall or embankment for gravity access as long as the entirety of the tank is visible.
- (g) The permit holder of a septage treatment or detention facility shall control odors from the facility at the property boundary.
- (h) Ground water monitoring wells or a leak detection system may be required around treatment or detention systems if necessary to assure protection of public health and the environment.
- (i) The area around tanks shall be free of debris and vegetation to allow for access and inspection for a distance of at least 5 feet.
- (j) Septage shall be transferred to and from a detention system in a safe and sanitary manner that prevents leaks or spills of septage, including septage in pipes used for transferring waste to and from vehicles.
- (k) Access roads or paths crossing or leading to the facility shall be posted with "NO TRESPASSING" signs.
- (l) Requirements for lined lagoons:
- (1) Lined lagoons shall be permitted only at sites where the construction and use of a lagoon shall not jeopardize the public health or environment.
  - (2) Portions of lined lagoons may be located below grade in accordance with Subparagraph (f)(1) of this Rule.
  - (3) Only lagoons designed, constructed and inspected in accordance with accepted engineering principles providing for the protection of the underlying groundwater will be considered for use in a septage treatment or detention system. If required by G.S. 89C, a professional engineer shall certify that the construction was completed in substantial compliance with the plans and specifications prior to any waste being introduced into the system. [Note: The North Carolina Board of Examiners for Engineers and Surveyors, has determined, via letter and resolution dated March 11, 2010, that certification of documents pursuant to this Paragraph constitutes practicing engineering under G.S. 89C.]
  - (4) Liners shall be a minimum of 12 inches of clay compacted to a maximum permeability of  $10^{-7}$  cm/sec or equivalent synthetic liner.
  - (5) Synthetic liners shall have a minimum thickness of 30 mils. A synthetic liner shall have a demonstrated water vapor transmission rate of not more than 0.03 gm/m<sup>2</sup>/day. Liner material and any

seaming materials shall have chemical and physical resistance not adversely affected by environmental exposure or waste placement.

- (6) Clay liners with a permeability more than  $10^{-7}$  cm/sec may be used in conjunction with a synthetic liner to meet the maximum permeability of  $10^{-7}$  cm/sec or equivalent.
  - (7) The surface of the supporting soil on which the liner will be installed shall be reasonably free of stones, organic matter, protrusions, loose soil, and any abrupt changes in grade that could affect the integrity of the liner.
  - (8) Lagoons shall be designed and maintained to have adequate storage to handle the additional water from a 25-year storm.
  - (9) Lagoons shall be protected from entry by unauthorized individuals by fencing or other appropriate means.
- (m) Septage detention and treatment facilities shall adhere to the following minimum setback requirements:
- (1) Residence, place of business, or place of public assembly – 100 feet;
  - (2) Well or water supply spring – 100 feet;
  - (3) Surface waters – 100 feet;
  - (4) Property lines – 50 feet;
  - (5) Facilities permitted after the effective date of this Rule shall not be located in the 100-year flood plain hazard area.
  - (6) Soil wetness, as determined in Part (a)(3)(A) of Rule .0837 – 12 inches;
  - (7) Setbacks in Subparagraphs (1) and (4) of this Paragraph may be in accordance with local zoning ordinances if located in areas zoned for industrial use.
  - (8) Setbacks in Subparagraphs (1) through (4) shall be increased 100% for lagoons; and
  - (9) Accurate property line location is the responsibility of the site operator.
- (n) All setbacks shall be maintained.
- (o) The setbacks in Subparagraph (m)(1) through (4) of this Rule shall be increased for storage facilities with a capacity in excess of 25,000 gallons permitted after the effective date of this Rule to prevent offsite contamination from major spills, or 100% containment shall be provided. Increased setbacks shall be up to twice the minimum distance as indicated in Subparagraph (m)(1) through (4) of this Rule. Permitted volume and the proximity to residences, wells or water supply springs, surface waters, and property lines will determine the setback.
- (p) Storage containers for individual restaurants shall be:
- (1) Located above grade and protected from vehicular traffic;
  - (2) Maintained fly tight and in a sanitary condition;
  - (3) Placed at a location and acceptable to standards determined by the NC Division of Environmental Health; and
  - (4) No greater than 200 gallons in size.
- (q) Setbacks for detention tanks at marinas may be reduced for storage capacity of 2000 gallons or less when the facility is designed to prevent leaks or spills or has containment equaling 100% of the storage volume plus rainfall from a 25-year storm event. Setbacks shall in no case be less than what is approved by applicable local government, state or federal laws or rules.
- (r) Septage shall not be stored in a detention or treatment facility for more than six months.
- (s) Septage shall not be stored or treated at a new septage treatment or detention facility until a representative of the Division has inspected the facility to determine compliance with these Rules and consistency with the permit application and all permit conditions.
- (t) Septage detention and treatment facility closure shall include:
- (1) A completed ceased operation form submitted to the Division;
  - (2) All liquids and solids, resulting from septage detention or treatment, removed from all portions of the facility and properly managed or disposed at an appropriate, approved facility; and
  - (3) All parts of the facility removed from property under separate ownership, unless all landowners provide the Division with written documentation that the facility may remain at the site.
- (u) Record keeping for detention facilities that receive septage from more than one septage management firm shall include:
- (1) The date that the septage is received at and removed from the facility;
  - (2) Name of the septage management firm that delivered the septage;
  - (3) Type and amount, in gallons, of septage received; and
  - (4) Where septage is discharged.

(v) Record keeping for treatment facilities shall include:

- (1) Date septage is received at the facility;
- (2) Name of the septage management firm that delivered the septage;
- (3) Type and amount, in gallons, of septage received;
- (4) Date processed material(s) is removed from the facility;
- (5) Type and amount, in tons or gallons, of material removed from the facility; and
- (6) Management methods for each type of material removed by the facility

(w) Alarms shall be required to detect high liquid levels, leaks and spills, or system operation parameters at detention or treatment facilities when the location, design, capacity, or operational complexities of the facility warrant the additional safety precautions.

*History Note: Authority G.S. 130A-291.1;  
Eff. April 1, 2010.*