

15A NCAC 13B .0838 STANDARDS FOR SEPTAGE DETENTION AND TREATMENT FACILITIES

(a) Septage detention facilities used to meet the requirements of Rule .0842(a)(19) of this Section shall have a minimum size equal to two percent of the maximum annual application rate. The Division shall increase the minimum size requirement for any increase in the maximum annual application rate or if it is demonstrated during site operation that this volume is inadequate or if specific site considerations would warrant such increases. The Division shall notify the owner or operator of the facility of the increase. This Paragraph does not limit the maximum capacity of a septage detention facility.

(b) Each site shall have an all weather access road.

(c) Septage treatment and detention facility containers shall be constructed of steel, concrete, plastic, or fiberglass; and shall be free of evidence of damage or weakness such as holes or cracks that may allow the escape of septage.

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 11, 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 shall be 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 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) be constructed in substantial compliance with the plans and specifications prior to any waste being introduced into the system. If required by G.S. 89C, a professional engineer shall certify this compliance. [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 may 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 minimize odors from the facility at the property boundary.

(h) The Division may require that groundwater monitoring wells or a leak detection system be installed around treatment or detention systems for protection of public health and the environment if there is evidence of a leaking tank.

(i) The area around tanks shall be free of debris and vegetation to allow for access and inspection for a distance of 5 feet.

(j) Septage shall be transferred to and from a detention system in a manner that prevents leaks or spills of septage onto the ground surface or exterior surface of the detention system, 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 does not jeopardize the public health or environment.
- (2) Portions of lined lagoons located below grade shall be in substantial compliance with the plans and specifications prior to any waste being introduced into the system. If required by G.S. 89C, a professional engineer shall certify this compliance. [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.];
- (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/m²/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 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 means.
- (m) Septage detention and treatment facilities shall adhere to the following minimum setback requirements:
- (1) residence, place of business, except septage firm 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 April 1, 2010 shall not be located in the 100-year flood plain hazard area;
 - (6) soil wetness, as determined in of Rule .0841(a)(3)(A) of this Section – 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) of this Paragraph shall be increased 100% for lagoons; and
 - (9) accurate property line location shall be the responsibility of the site operator.
- (n) At the time of initial permitting, septage detention and treatment facilities shall observe the minimum setback distances specified in this Rule. Minimum setbacks shall be maintained throughout the life of the facility 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 facility shall include restrictions to ensure continued maintenance of the setbacks.
- (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 April 1, 2010 to prevent offsite contamination from major spills, or 100% containment shall be provided. Increased setbacks shall be twice the minimum distance as indicated in Subparagraph (m)(1) through (4) of this Rule, unless the permitted volume and the proximity to residences, wells or water supply springs, surface waters, or property lines dictate a reduced setback determined by the Division on a case-by-case basis.
- (p) Storage containers for individual restaurants shall be:
- (1) located above grade and protected from vehicular traffic;
 - (2) kept free of grease on the exterior surface of the container and the ground surface, maintained to be impervious to flies, and shall not attract vectors;
 - (3) placed at a location and acceptable to and determined by the local health department and the NC Department of Health and Human Services; 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) Permit holders of all septage detention and treatment facilities shall have all records required in accordance with this Section available for review during inspections by the Division or upon the Division's request.
- (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 written notification of cease of operations submitted to the Division that shall include the permit number, the date of cease of operations, and the signature of the operator;
 - (2) all liquids and solids, resulting from septage detention or treatment, removed from all portions of the facility and managed or disposed at an 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;
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