

15A NCAC 13B .0840 SEPTAGE LAND APPLICATION SITE PERMITS

(a) No person shall establish, or allow to be established upon any real property owned, operated, leased, or controlled by that person, a septage management facility to treat, manage, store, or dispose of septage, or any component of septage, unless a permit has been obtained from the Division. Septage shall not be disposed of by trenching or burial.

(b) Any person that has not operated as a septage land application site during the previous calendar year shall receive at least three hours of new land application site operator training from the Division prior to receiving a permit to operate a septage land application site.

(c) To apply for a permit for a septage land application site, the following information shall be submitted to the Division:

- (1) name, address, and phone number of:
 - (A) the applicant;
 - (B) the landowner or the landowner's legal representative in control of the site; and
 - (C) the proposed operator;
- (2) location of the site;
- (3) written authorization to operate a septage land application site signed by each landowner (if other than the permit holder) or the landowner's legal representative;
- (4) types of septage and the proposed annual volume of each type of septage proposed for land application per acre, based on the nutrient management plan submitted in accordance with Subparagraph (c)(12) of this Rule;
- (5) substances other than septage previously disposed of at this location, and the amounts of those substances;
- (6) aerial photography extending for a distance of at least 2500 feet in all directions from the site, with site property boundaries depicted;
- (7) alternative plan for the detention or disposal of septage, during conditions that cause the site to be unavailable for use, such as adverse weather conditions;
- (8) treatment method for each type of septage to be discharged and the permit number of any treatment facilities;
- (9) vicinity map (county road map) showing the site location;
- (10) a written report that documents compliance with Rule .0841 of this Section including:
 - (A) a representative soils analysis such as the Standard Soil Fertility Analysis, conducted within the last six months, on each proposed field of each proposed land application site. The representative soils analysis shall include acidity, base saturation (by calculation), calcium, cation exchange capacity, exchangeable sodium percentage (by calculation), magnesium, manganese, percent humic matter, pH, phosphorus, potassium, and sodium, and may include additional analyses;
 - (B) a total metal analysis for each proposed field shall be conducted for arsenic, cadmium, copper, lead, nickel, selenium, and zinc. A North Carolina Department of Agriculture & Consumer Services (NCDA & CS) mehlich-3 extraction shall be an acceptable substitute for a total metal analysis. Mercury shall be sampled if the applicant proposes to land apply domestic or industrial or commercial treatment plant septage, or if warranted by previous site use;
 - (C) field description of soil profile(s), based on examinations of excavation pits and auger borings, within four feet of the land surface or to bedrock describing the following parameters by individual diagnostic horizons: thickness of the horizon; texture; color and other diagnostic features; structure; internal drainage; depth, thickness, and type of restrictive horizon(s); and presence or absence and depth of evidence of any seasonal high water table. Applicants may be required to dig pits when necessary for evaluation of the soils at the site;
 - (D) a soil map delineating major soil mapping units within each proposed land application site and showing all physical features, location of pits and auger borings, setbacks required in accordance with this Section, legends, scale, and a north arrow;
 - (E) if the annual application rate is proposed to exceed 125,000 gallons per acre per year, field descriptions to a depth of six feet shall be required; and
 - (F) Global Positioning System (GPS) data compatible with the Division's datalogger shall be provided for proposed sites 30 acres or more in size.

If required by G.S. 89F, G.S. 89C, and G.S. 89E, a licensed soil scientist, professional engineer, or licensed geologist shall prepare these documents. [Note: The North Carolina Board of Licensing of Soil Scientists, Board of Examiners for Engineers and Surveyors, and the Board of Licensing of Geologists has determined, via letters dated November 16, 2009, March 11, 2010, and January 7, 2010, that preparation of documents pursuant to this Paragraph constitutes soil science, practicing engineering, or geology under G.S. 89F, G.S. 89C, and G.S. 89E.]

- (11) applicants proposing to land apply 200,000 gallons per acre per year or more shall provide a plan for monitoring soil moisture levels and the depth to seasonal wetness to determine when land application may occur without impacting groundwater or hydraulic overloading. The plan shall include recommendations concerning annual and instantaneous loading rates of liquids, solids, other wastewater constituents, and amendments based on in-situ measurement of saturated hydraulic conductivity in the most restrictive horizon. If required by G.S. 89C, G.S. 89F, and G.S. 89E, a professional engineer, licensed soil scientist, or licensed geologist shall prepare these documents. [Note: The North Carolina Board of Examiners for Engineers and Surveyors, Board of Licensing of Soil Scientists, and the Board of Licensing of Geologists has determined, via letters dated March 11, 2010, November 16, 2009, and January 7, 2010, that preparation of documents pursuant to this Paragraph constitutes practicing engineering, soil science, or geology under G.S. 89C, G.S. 89F, and G.S. 89E.]
- (12) a nutrient management plan prepared by an environmental professional that shall include the following:
 - (A) crops that will be planted on the site, including cover crops, and where each crop will be planted. Crop planting locations shall be depicted on an aerial photograph or on a plat map;
 - (B) nitrogen needs of the crops based on the realistic yield expectations for the soils on the site, and crop management practices proposed;
 - (C) crop stand density required to meet the realistic yield expectations for the proposed crop;
 - (D) approximate crop planting times and the seeding or sprigging rates for crops to be established;
 - (E) crop harvest frequency appropriate for the proposed realistic yield expectations and nitrogen needs, and approximate crop harvest times;
 - (F) approximate monthly discharge rate to match the nitrogen needs and potential uptake of the crop;
 - (G) sites proposed to receive more than 50,000 gallons per acre per year of domestic or industrial or commercial treatment plant septage, or domestic or grease septage that has been treated to remove solids, fats, oils, and grease shall include nitrogen carry over when determining annual application rates;
 - (H) weed control recommendations;
 - (I) crop use or removal;
 - (J) results from at least four samples of treated septage if the application is proposing an increased application rate for the land application of septage treated to reduce nutrients; and
 - (K) the signature of the site operator.

For the purposes of this Rule, an environmental professional means a person who has received a post-secondary degree from a college or university and has training and experience in or related to agronomic principles utilized to manage wastewater. Preparation by an environmental professional shall not be required for nutrient management plans for renewal applications that do not contain changes that would affect nutrient uptake.
- (13) application rates for sites proposed to receive treated septage shall be determined based on the most limiting nutrient;
- (14) erosion and runoff management plan showing:
 - (A) buffer locations and widths based on the direction and amount of slope adjacent to the land application site;
 - (B) vegetation type and stand density in the buffer areas; and
 - (C) buffer maintenance fertility requirements.
- (15) proposed land application method;
- (16) proposed distribution plan if required in Paragraph (e) of Rule .0841 of this Section;

- (17) sites proposing to use spray irrigation as a land application method shall include:
 - (A) the location of all fixed irrigation heads or the location of traveling gun irrigation lanes;
 - (B) irrigation head spacing and traveling gun lane spacing shall be determined based on standards in NC Cooperative Extension Documents AG-553-6 and AG-553-7 which are hereby incorporated by reference including subsequent amendments and additions;
 - (C) the size of all spray nozzles;
 - (D) system operating pressure at the irrigation head;
 - (E) calculation of the wettable acres vs. permitted acreage;
 - (F) calibration methods and frequency; and
 - (G) irrigation system operation and maintenance plan.
 - (18) documentation from the Department of Natural and Cultural Resources that the land application site complies with Rule .0841(g) of this Section if any part of the site specified for land application is not agricultural land;
 - (19) the date, location, number of hours, and provider of annual septage land application site operator training required in accordance with G.S. 130A-291.3(b);
 - (20) any other information that the Division may request that is pertinent to the suitability of the proposed site if it is necessary to determine compliance with this Section;
 - (21) an applicant who proposes to land apply septage on a public contact site, shall provide the Division evidence of public notice and the applicant shall have completed the Land Application of Residuals Course and maintain a Land Application of Residuals Certificate issued by the Department of Environmental Quality;
 - (22) an applicant who proposes to land apply industrial or commercial treatment plant septage or domestic treatment plant septage shall have completed the Land Application of Residuals Course and maintain a Land Application of Residuals Certificate issued by the Department of Environmental Quality;
 - (23) an applicant who proposes to land apply septage in excess of 50,000 gallons per acre per year shall provide the Division with evidence of public notice which shall at a minimum be publication with a local news organization, and shall have completed the Land Application of Residuals Course and maintain a Land Application of Residuals Certificate issued by the Department of Environmental Quality; and
 - (24) an approval letter from the unit of local government having zoning authority over the area where the facility is to be located stating that the proposed facility meets all of the requirements of the local zoning ordinance, or that the site is not zoned.
- (d) The Division shall not issue a permit to land apply septage at a rate in excess of 50,000 gallons per acre per year or a permit to land apply domestic treatment plant septage or industrial or commercial treatment plant septage until the applicant has operated a septage land application site in accordance with this Section for at least a 12 month period.
- (e) Applications for permits issued in accordance with this Rule shall be submitted to the Division of Waste Management, Solid Waste Section, 1646 Mail Service Center, Raleigh NC 27699-1646. Applications for permits will not be reviewed until all parts of the application have been completed and submitted to the Division.
- (f) Applications for permits that do not meet the standards in accordance with this Section shall be denied.
- (g) Applications for renewal permits issued in accordance with this Rule shall be submitted to the Division at least 90 days prior to the expiration date of the permit. The Division shall notify permit holders of facility permit expiration dates 120 days prior to permit expiration.
- (h) Applications for permit modification shall be required for the following changes:
- (1) permitted area or field boundaries;
 - (2) property ownership;
 - (3) annual application rates;
 - (4) receiver crop; or
 - (5) types of septage discharged.
- (i) Applications for renewal permits submitted in accordance with Paragraph (g) of this Rule and applications for permit modifications shall not be required to resubmit the information required in Subparagraphs (c)(6), (8), (9), (10), (16), (17), and (18) unless changes are made in those plans.
- (j) Septage land application site permits shall not be transferable.
- (k) Permit duration shall be in accordance with Rule .0832(a)(8) of this Section.

History Note: Authority G.S. 130A-291.1;
Eff. April 1, 2010;
Readopted Eff. February 1, 2019 (Recodified from 15A NCAC 13B .0835).