

**§ 130A-295.6. Additional requirements for sanitary landfills.**

(a) The applicant for a proposed sanitary landfill shall contract with a qualified third party, approved by the Department, to conduct a study of the environmental impacts of any proposed sanitary landfill, in conjunction with its application for a new permit as defined in G.S. 130A-294(a3). The study shall meet all of the requirements set forth in G.S. 113A-4 and rules adopted pursuant to G.S. 113A-4. If an environmental impact statement is required, the Department shall publish notice of the draft environmental impact statement and shall hold a public hearing in the county where the landfill will be located no sooner than 30 days following the public notice. The Department shall consider the study of environmental impacts and any mitigation measures proposed by the applicant in deciding whether to issue or deny a permit. An applicant for a permit for a sanitary landfill shall pay all costs incurred by the Department to comply with the public notice and public hearing requirements of this subsection.

(b) The Department shall require a buffer between any perennial stream or wetland and the nearest waste disposal unit of a sanitary landfill of at least 200 feet. The Department may approve a buffer of less than 200 feet, but in no case less than 100 feet, if it finds all of the following:

- (1) The proposed sanitary landfill or expansion of the sanitary landfill will serve a critical need in the community.
  - (2) There is no feasible alternative location that would allow siting or expansion of the sanitary landfill with 200-foot buffers.
- (c) A waste disposal unit of a sanitary landfill shall not be constructed within:
- (1) A 100-year floodplain or land removed from a 100-year floodplain designation pursuant to 44 Code of Federal Regulations Part 72 (1 October 2006 Edition) as a result of man-made alterations within the floodplain such as the placement of fill, except as authorized by variance granted under G.S. 143-215.54A(b). This subdivision does not apply to land removed from a 100-year floodplain designation (i) as a result of floodplain map corrections or updates not resulting from man-made alterations of the affected areas within the floodplain, or (ii) pursuant to 44 Code of Federal Regulations Part 70 (1 October 2006 Edition) by a letter of map amendment.
  - (2) A wetland, unless the applicant or permit holder can show all of the following, as to the waste disposal unit:
    - a. Where applicable under section 404 of the federal Clean Water Act or applicable State wetlands laws, the presumption that a practicable alternative to the proposed waste disposal unit is available which does not involve wetlands is clearly rebutted;
    - b. Construction of the waste disposal unit will not do any of the following:
      1. Cause or contribute to violations of any applicable State water quality standard.
      2. Violate any applicable toxic effluent standard or prohibition under section 307 of the federal Clean Water Act.
      3. Jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat, protected under the federal Endangered Species Act of 1973.
      4. Violate any requirement under the federal Marine Protection, Research, and Sanctuaries Act of 1972.
    - c. Construction of the waste disposal unit will not cause or contribute to significant degradation of wetlands.

- d. To the extent required under section 404 of the federal Clean Water Act or applicable State wetlands laws, any unavoidable wetlands impacts will be mitigated.

(d) The Department shall not issue a permit to construct any disposal unit of a sanitary landfill if, at the earlier of (i) the acquisition by the applicant or permit holder of the land or of an option to purchase the land on which the waste disposal unit will be located, (ii) the application by the applicant or permit holder for a franchise agreement, or (iii) at the time of the application for a permit, any portion of the proposed waste disposal unit would be located within:

- (1) Five miles of the outermost boundary of a National Wildlife Refuge.
- (2) One mile of the outermost boundary of a State gameland owned, leased, or managed by the Wildlife Resources Commission pursuant to G.S. 113-306, prior to July 1, 2013, except as provided in subdivision (2a) of this subsection.
- (2a) Five hundred feet of the outermost boundary of a State gameland owned, leased, or managed by the Wildlife Resources Commission pursuant to G.S. 113-306, prior to July 1, 2013, when all of the following conditions apply:
  - a. The waste disposal unit will only be permitted to accept construction and demolition debris waste.
  - b. The disposal unit is located within the primary corporate limits of a municipality located in a county with a population of less than 15,000.
  - c. All portions of the gameland within one mile of the disposal unit are separated from the disposal unit by a primary highway designated by the Federal Highway Administration as a U.S. Highway.
- (3) Two miles of the outermost boundary of a component of the State Parks System.

(e) A sanitary landfill for the disposal of construction and demolition debris waste shall be constructed with a liner system that consists of a flexible membrane liner over two feet of soil with a maximum permeability of  $1 \times 10^{-5}$  centimeters per second. The flexible membrane liner shall have a minimum thickness of thirty one-thousandths of an inch (0.030"), except that a liner that consists of high-density polyethylene shall be at least sixty one-thousandths of an inch (0.060") thick. The flexible membrane liner shall be installed in direct and uniform contact with the soil layer. The Department may approve an alternative to the soil component of the liner system if the Department finds, based on modeling, that the alternative liner system will provide an equivalent or greater degree of impermeability.

(f) A sanitary landfill, other than a sanitary landfill for the disposal of construction and demolition debris waste, shall be constructed so that the post-settlement bottom elevation of the liner system, or the post-settlement bottom elevation of the waste if no liner system is required, is a minimum of four feet above both the seasonal high groundwater table and the bedrock datum plane contours. A sanitary landfill for the disposal of construction and demolition debris waste shall be constructed so that the post-settlement bottom elevation of the flexible membrane liner component of the liner system is a minimum of four feet above both the seasonal high groundwater table and the bedrock datum plane contours.

(g) A permit holder for a sanitary landfill shall develop and implement a waste screening plan. The plan shall identify measures adequate to ensure compliance with State laws and rules and any applicable local ordinances that prohibit the disposal of certain items in landfills. The plan shall address all sources of waste generation. The plan is subject to approval by the Department.

(h) The following requirements apply to any sanitary landfill for which a liner is required:

- (1) A geomembrane base liner system shall be tested for leaks and damage by methods approved by the Department that ensure that the entire liner is evaluated.
- (2) A leachate collection system shall be designed to return the head of the liner to 30 centimeters or less within 72 hours. The design shall be based on the precipitation that would fall on an empty cell of the sanitary landfill as a result of a 25-year-24-hour storm event. The leachate collection system shall maintain a head of less than 30 centimeters at all times during leachate recirculation. The Department may require the operator to monitor the head of the liner to demonstrate that the head is being maintained in accordance with this subdivision and any applicable rules.
- (3) All leachate collection lines shall be designed and constructed to permanently allow cleaning and remote camera inspection. Remote camera inspections of the leachate collection lines shall occur upon completion of the construction and at least once every five years. Cleaning of leachate collection lines found necessary for proper functioning and to address buildup of leachate over the liner shall occur.
- (4) Any pipes used to transmit leachate shall provide dual containment outside of the disposal unit. The bottom liner of a sanitary landfill shall be constructed without pipe penetrations.

(h1) With respect to requirements for daily cover at sanitary landfills, once the Department has approved use of an alternative method of daily cover for use at any sanitary landfill, that alternative method of daily cover shall be approved for use at all sanitary landfills located within the State.

(h2) Studies and research and development pertaining to alternative disposal techniques and waste-to-energy matters shall be conducted by certain sanitary landfills as follows:

- (1) The owner or operator of any sanitary landfill permitted to receive more than 240,000 tons of waste per year shall research the development of alternative disposal technologies. In addition, the owner or operator shall allow access to nonproprietary information and provide site resources for individual research and development projects related to alternative disposal techniques for the purpose of studies that may be conducted by local community or State colleges and universities or other third-party developers or consultants. The owner or operator shall report on research and development activities conducted pursuant to this subdivision, and any results of these activities, to the Department annually on or before July 1.
- (2) The owner or operator of any sanitary landfill permitted to receive more than 240,000 tons of waste per year shall perform a feasibility study of landfill gas-to-energy, or other waste-to-energy technology, to determine opportunities for production of renewable energy from landfills in order to promote economic development and job creation in the State. The owner or operator shall initiate the study when sufficient waste is in place at the landfill to produce gas, as determined by the United States Environmental Protection Agency's Landfill Gas Emissions Model (LandGEM), and may consult and coordinate with other entities to facilitate conduct of the study, including local and State government agencies, economic development organizations, consultants, and third-party developers. The study shall specifically examine opportunities for returning a portion of the benefits derived from energy produced from the landfill to the jurisdiction within which the landfill is located in the form of direct supply of energy to the local government and its

citizens, or through revenue sharing with the local government from sale of the energy, with revenues owing to the local government credited to a fund specifically designated for economic development within the jurisdiction. The owner or operator shall report on its activities associated with the study, and any results of the study, to the Department annually on or before July 1.

- (i) The Department shall not issue a permit for a sanitary landfill that authorizes:
  - (1) A capacity of more than 55 million cubic yards of waste.
  - (2) A disposal area of more than 350 acres.
  - (3) A maximum height, including the cap and cover vegetation, of more than 250 feet above the mean natural elevation of the disposal area.
- (j) This section does not apply to landfills for the disposal of land clearing and inert debris or to Type I or Type II compost facilities. (2007-543, s. 1(a)-(c); 2007-550, s. 9(a), (c); 2013-25, s. 1; 2013-410, s. 47.6; 2013-413, s. 59.1; 2020-74, s. 13.)