15A NCAC 18E .0510 SPECIAL SITE EVALUATIONS

(a) A special site evaluation shall demonstrate that the proposed use of the site with a specific wastewater system design and configuration will not result in effluent discharge to the ground surface or contravention of groundwater or surface water standards. Special site evaluations shall be performed by a licensed professional, if required in G.S. 89C, 89E, or 89F.

(b) The owner may submit a special site evaluation for a site classified as unsuitable as set forth in Rule .0509 of this Section to an authorized agent. The special site evaluation shall include written documentation and demonstrate that the proposed wastewater system can be expected to overcome the unsuitable site conditions and function in accordance with this Subchapter.

(c) Any site that is proposed with one or more of the following shall require a special site evaluation:

(1) proposal submitted in accordance with Rule .0509(c) of this Section;

(2) sand lined trench systems when the texture of the receiving permeable horizon is sandy loam or loam and the DDF is greater than 600 gpd, or when the texture of the receiving permeable horizon is silt loam;

(3) DSE drip dispersal systems meeting the following soil and site conditions:

(A) depth from the naturally occurring soil surface to any LC is greater than or equal to 18 inches and the LTAR is proposed to exceed 0.5 gpd/ft^2 for Group I, 0.35 gpd/ft^2 for Group II, or 0.2 gpd/ft^2 for Group III soils;

(B) depth from the naturally occurring soil surface to any SWC is less than 18 inches and the LTAR is proposed to exceed 0.5 gpd/ft^2 for Group I, 0.3 gpd/ft^2 for Group II, or 0.15 gpd/ft^2 for Group III soils;

(C) Group IV soils are encountered within 18 inches of the naturally occurring soil surface or within 12 inches of the infiltrative surface, whichever is deeper, and the LTAR is proposed to exceed 0.05 gpd/ft^2;

(D) Group IV soils are encountered within 18 inches of the naturally occurring soil surface and the depth from the naturally occurring soil surface to any LC is less than 24 inches;

(E) Group IV soils are encountered within 18 inches of the naturally occurring soil surface and the driplines are installed in new fill material;

(F) groundwater lowering system is used to comply with soil depth and vertical separation requirements to a SWC;

(G) proposed LTAR exceeds that assigned by the LHD; or

(H) DDF is greater than 1,500 gpd;

(4) advanced pretreatment systems meeting the following soil and site conditions:

(A) vertical separation to a LC is proposed to be reduced. The vertical separation to rock or tidal water shall not be reduced to less than 12 inches;

(B) less than 18 inches of naturally occurring soil to a LC, excluding SWC;

(C) increased LTAR is proposed for a site with Group III or IV soils within three feet of the infiltrative surface;

(D) increased LTAR is proposed for a site with Group II or III soils that requires a groundwater lowering system;

(E) proposed use of a groundwater lowering system to comply with vertical separation requirements to a SWC;

(F) bed systems located beneath the advanced pretreatment unit on a site with uniform slope exceeding two percent except in Group I soils with a SWC greater than 36 inches;

(G) bed systems with a DDF greater than 1,500 gpd; or

(H) increased LTAR is proposed on a site with a DDF greater than 1,500 gpd;

(5) drip dispersal systems and Group IV soils are within 18 inches of the naturally occurring soil surface or within 12 inches of the infiltrative surface, whichever is deeper, and the LTAR is proposed to exceed 0.1 gpd/ft^2 for NSF/ANSI 40, 0.12 gpd/ft^2 for TS-I, or 0.15 gpd/ft^2 for TS-II;

(6) NSF/ANSI 40 and drip dispersal systems when the LTAR is proposed to exceed 0.8 gpd/ft^2 for Group I soils, 0.5 gpd/ft^2 for Group II soils, 0.25 gpd/ft^2 for Group III soils, or 0.1 gpd/ft^2 for Group IV soils;

(7) TS-I and drip dispersal systems which meet the following criteria:

(A) site has less than 18 inches of naturally occurring soil to any unsuitable LC;

(B) Group III soils are present and a groundwater lowering system is used to comply with the vertical separation requirements to a SWC;

(C) Group IV soils are encountered within 18 inches of the naturally occurring soil surface, the LTAR is proposed to exceed 0.05 gpd/ft^2, and the system is proposed to be installed in new fill; or

(D) LTAR is proposed to exceed 1.0 gpd/ft^2 for Group I soils, 0.6 gpd/ft^2 for Group II soils, 0.3 gpd/ft^2 for Group III soils, or 0.12 gpd/ft^2 for Group IV soils;

(8) TS-II and drip dispersal systems which meet the following criteria:

(A) Subparagraphs (7)(A), (B), or (C) of this Rule; or

(B) LTAR is proposed to exceed 1.2 gpd/ft^2 for Group I soils, 0.7 gpd/ft^2 for Group II soils, 0.4 gpd/ft^2 for Group III soils, or 0.15 gpd/ft^2 for Group IV soils;

(9) site-specific nitrogen migration analysis is required to verify that the nitrate-nitrogen concentration at the property line will not exceed groundwater standards;

(10) LHD or Department determines that the combination of soil conditions, site topography and landscape position, DDF, system layout, and proposed stormwater appurtenances will potentially result in hydraulic overload; or

(11) DDF greater than 3,000 gpd, unless the requirements of Rule .0302(f) of this Subchapter are met.

(d) The special site evaluation shall include hydrologic or hydraulic testing, as applicable, and analysis, in accordance with Rule .0304(2)(b) of this Subchapter.

(e) For wastewater systems with a DDF greater than 3,000 gpd, the special site evaluation shall include sufficient site-specific data to predict the height of the water table mound that will develop beneath the field on level sites and the rate of lateral and vertical flow away from the trenches on sloping sites, unless the conditions in Paragraph (f) of this Rule are met. The data submitted may include deep soil borings to an impermeable layer or to a depth to support the hydrologic testing and modeling, permeability, in-situ Ksat measurements, water level readings, and other information determined to be necessary by the LHD or the Department, such as the impact of projected wastewater constituents on the trench and receiving soil. The site shall be considered unsuitable if the data indicate any of the following:

(1) the groundwater mound that will develop beneath the site cannot be maintained two feet or more below the bottom of the trenches;

(2) effluent is likely to become exposed on the ground surface; or

(3) contaminant transport analysis indicates that groundwater standards established in accordance with 15A NCAC 02L are determined or projected to be violated at the property line.

(f) For wastewater systems with a DDF greater than 3,000 gpd and dispersal fields designed for less than or equal to 1,500 gpd, in-situ Ksat measurements and groundwater mounding or lateral flow analysis shall not be required if a special site evaluation demonstrates that the dispersal fields are in separate lateral flow windows or are shown to not be hydraulically connected.

(g) The Department shall review the special site evaluation if requested by the LHD or if required in accordance with Rule .0302(e) of this Subchapter.

History Note: *Authority G.S. 89E; 89F; 130A-335(a1), (e), and (f);*
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