

CHAPTER 15

SOIL DRAINAGE MANAGEMENT PLAN DESIGN

STATE HEALTH DEPARTMENT SEWAGE HANDLING AND DISPOSAL REGULATIONS

Article 5

Installation of Residential Sewage Disposal Systems in Political Subdivisions Having Soil Drainage Management Contracts with the State Health Department

15.0. 12VAC5-610-600 GENERAL.

It is the policy of the department to grant sewage disposal system permits for private residential systems utilizing subsurface soil absorption whenever such permits can be granted without endangering public health. Many soils are limited in their ability to accept sewage by high seasonal water tables. Some soils can accept sewage when an adequate local plan for soil Drainage Management Contract with the department and subsequently develops Soil Drainage Management Plan(s) in an area in which soils respond to artificial drainage and the plan is acceptable to the department, the department will consider the approval of subsurface soil absorption systems in soils that were previously unacceptable because of high seasonal water tables.

A. 12VAC5-610-610 DEFINITIONS.

Soil Drainage Management Contract (SDMC) means a contract between the department and the political subdivision for the development, operation, maintenance, and enforcement of all soil drainage management plans within the political subdivision.

Soil Drainage Management Plan (SDMP) means a plan approved by the commissioner, pursuant to 12VAC5-610-630 below, meeting criteria set forth in 12VAC5-610-640 below.

OSE means Authorized Onsite Soil Evaluator as licensed by the Virginia Department of Professional and Occupational Regulation.

B. 12VAC5-610-620 APPLICABILITY.

Part III, Article 5 shall be applicable only in those political subdivisions, which enter into Soil Drainage Management Contracts with the Department.

- C. 12VAC5-610-630 Procedures for entry into or withdrawal from a Soil Drainage Management Contract (SDMC).

15.1 Entry

- A. Any political subdivision in the Commonwealth may at any time apply to the department through the district or local health department for entry into an SDMC with the department. The application shall contain the following minimum elements:
 - 1. A proposed contract between the department and the political subdivision.
 - 2. Drafts of all ordinances, required easements, or other legal documents which the political subdivision proposes to adopt as a portion of the SDMC including a local ordinance requiring the holder of a sewage disposal construction permit issued in conjunction with the SDMC to have the permit recorded in the land records of the circuit court having jurisdiction.
- B. The department shall, within 60 days of the submission of an application for entry into and SDMC, evaluate the application and propose to the political subdivision any suggestions for modification to the SDMC.
- C. The political subdivision may review the department's suggested modifications and resubmit a revised application within such time as the political subdivision elects.
- D. The department shall accept or reject entry into and SDMC within 90 days of receipt of the final application from a political subdivision.
- E. Upon rejection by the department of a final application for entry into an SDMC, the political subdivision may appeal the department's decision to the appropriate circuit court. The Virginia Administrative Process Act, S 9-6.14:1, et seq., shall apply to such an appeal.

15.2. Withdrawal

- A. If the department determines that a political subdivision is failing to abide by the terms set forth in its SDMC with the department, the department may withdraw from the contract.
- B. The department shall, within 60 calendar days of its proposed withdrawal from an SDMC notify the political subdivision of the department's intent.

1. The political subdivision may apply to the department for a hearing upon the proposed withdrawal. Such hearing shall be held in accordance with the provisions governing case decisions contained within the Virginia Administrative Process Act
2. Within 30 calendar days after such hearing, the department shall notify the political subdivision whether the department will withdraw from the SDMC.
3. A decision by the department to withdraw from an SDMC may be appealed to the appropriate circuit court pursuant to the provisions of the Virginia Administrative Process Act.
4. If withdrawal occurs, continued maintenance of all SDMP's shall be the responsibility of the political subdivision in areas where permits were issued in accordance with these regulations.

15.3. 12VAC5-610-640 Minimum Standards for Soil Drainage Management Plans.

- A. Every SDMP offered in conjunction with a SDMC shall meet the following minimum standards for surface and groundwater management.
 1. Positive surface grading in the area of a dwelling and subsurface soil absorption's area at a minimum of 0.5%;
 2. Drainage ditches for diverting surface water and for lowering the seasonal groundwater table, which shall;
 - a. Completely surround the subsurface soil absorption system.
 - b. The perimeter ditch shall have absolute minimum grade of 0.2%.
 - c. Be located 70 ± 10 feet from the edge of the drainfield.
 - d. Have the invert of the ditch placed in a Group I, II or III soil at an elevation so that the normal water surface in the ditch is a least six inches below the invert of the trench of the subsurface soil absorption system.
 3. A French drain on one side in lieu of an open drainage ditch on one of the four sides.
 4. Diversion ditches or swales shall be:

- a. Required where adjacent property is equal to or higher in elevation than the proposed site and the adjacent property may be expected to discharge water onto the proposed site.
 - b. Designed to meet such site-specific individual requirements as the department determines to be necessary.
- 5. Diversion ditches, where required, or other ditches to transport stormwater and/or groundwater from a site to a receiving body in accordance with the political subdivision's criteria.
- 6. A receiving stormwater and groundwater drainage system which is adequate in capacity so that waters from a proposed site shall be conveyed to it in accordance with the political subdivision's criteria.
- 7. Ditches to remain open and not be piped and covered unless approved by appropriate local government official, such approval to be granted only with the concurrence of the department.
- 8. Only appurtenances to the subsurface soil absorption system shall be constructed within the confines of the perimeter ditches required in S 3.19 B 2a, above except where a French drain is provided on one side.
- 9. Lots which shall be a minimum of three (3) acres in size not including swamps or marshland.
- B. Single lot SDMP, a copy of Site Soil Evaluation and initial denial letter must be included with all plan submittals. The letter will include required drainfield size for primary treatment.
- C. Subdivision Developments; an AOSE (Onsite Soil Evaluator) or Professional Engineer will Submit to the Chesapeake Health Department for review, the soil evaluation and drainfield design on the "Abbreviated Design form" to the Chesapeake health Department for review. Upon Chesapeake Health Department completion of the review, the owner, consultant or Professional Engineer will submit the abbreviated Design form stating the drainfield sizes with the denial letter from the Chesapeake Health Department to Department of Development and Permits for review and approval. Drainfield size must be in accordance with the above.

15.4. Design Standards for all Soil Drainage Management Plans, Sites and Subdivisions

- A. Fill may be used within the drainfield to achieve the minimum positive grade of 0.5%, however the fill will not be considered in determining the minimum drainfield ditch depth. The drainfield and reserve areas shall not be located over an existing drainage ditch that was filled, where

applicable, individual approval may be sought from the Chesapeake Health Department must be obtained.

- B. Onsite topography is required, including sufficient data to determine the pre-developed drainfield elevations.
- C. The offset from the edge of the drainfield to the centerline of the ditch shall be 60-80 feet. Offsets greater than 80' must be approved by the Chesapeake Health Department prior to plan approval.
- D. If one of the ditches carries public water, it shall be sized based on ultimate runoff. When this is the case and the public ditch exceeds 10 feet top-of-bank width, the offset distance is to be a minimum of 50' measured from edge of drainfield to the top-of-bank.
- E. Drainfield ditch inverts shall be a minimum of $2' + 0.005(L)$ lower than edge of drainfield elevation (where L is the distance from edge of drainfield to centerline of ditch). However, the highest ditch elevation shall be at least 26" lower than the pre-developed minimum grade of any drainfield elevation unless a variance is approved by the Chesapeake Health Department.
- F. All SDMP ditches must be contained within recorded easements and perimeter ditches shall exhibit absolute minimum slope of 0.20%. The portion of the ditch outside the perimeter of the drainfield does not have to exhibit 0.2% slope to the .
- G. The use of public ditches as SDMP Ditches in a new subdivision shall be kept to a minimum. Public ditches serving as drainfield ditches must have absolute minimum 0.2% slope, and be located within easement or right-of-way.
- H. Wet or dry retention/detention for facilities are generally not accepted by the Virginia Department of Health for stormwater control in SDMP Subdivisions. Health Department approval for detention/ retention shall be obtained prior to plan submittals that proposed retention/detention.
- I. The receiving facility must be City maintained. If the receiving facility is not within the right-of-way or an existing public drainage easement then a drainage easement, sized to ultimate must be dedicated on the part of the ditch, which lies on the developer's property.
- J. The receiving public facility must exhibit a positive grade. Elevations in the receiving facility must be provided for a minimum of 200' upstream and 200' downstream of site to demonstrate positive grades.

- K. Ditch and shoulder improvements are required along the frontage of all SDMP lots created by a proposed subdivision. SDMP plans for existing parcels shall have a 50' minimum of ditch and shoulder improvements in the location of the proposed entrance. In any event, deepening a roadside ditch .5 feet will require ditch and shoulder improvements.
 - L. If the receiving ditch is not dry, the SDMP ditch shall tie in at an elevation above the normal water elevation. The ditch inverts and normal water elevation shall be shown on the plan.
 - M. Driveway pipes must be included on the construction plan for all SDMP's. Pipes shall be designed for ultimate flows in accordance with City criteria. Installation of driveway pipes shall be the responsibility of the developer (with note stating same on plan).
 - N. All ditches used as part of the soil drainage management system (except public ditches) require easements as describing under Drainage Policy. The easements shall be referred to as "Septic Tank Drainage Easements".
 - O. All plans/plats requiring soil drainage management must include the SDMP Easement and Drainage Statement (Appendix 7). All necessary two-party and three-party easements shall be executed prior to plan approval.
 - P. The acreage of each parcel (excluding wetland area) shall be specified on the Plan. Wetlands shall be delineated on the plans or note stating that no wetlands are within the development.
 - Q. A City standard French drain may be used in lieu of an open drainage ditch on one of the four sides. The drainfield ditches should be graded so that no other perimeter ditches are required to drain through the French drain.
- 15.5. 12VAC5-610-650 Department procedures relating to subsurface soil absorption system applications in SDMC counties and cities.
- A. All applications for subsurface soil absorption systems will be evaluated based in the criteria contained in Part III, Article I and Part IV of these regulations. When the site is limited only by a high seasonal water table and/or surface runoff the department shall require that a satisfactory SDMP be in place and functioning satisfactorily before issuance of a construction permit. Typed on the construction permit will be the following statement, which shall be signed by the applicant:

I understand that this soil has severe limitations for the disposal of septic effluent. With the aforementioned drainage measures the health

department expects reasonable serviceability; however, it may malfunction during extreme conditions.

I understand and acknowledge the above and agree to install and maintain the drainage measures.

Signed: _____

Date: _____

- B. Soils to be considered shall demonstrate their ability to be artificially drained and shall fall generally into Texture Group I, II, III.
- C. The SDMP and site specific drainage system(s) shall be certified, supervised, maintained and prepared by or under the direct supervision of a professional engineer licensed in Virginia who is a full time employee of the political subdivision. In addition the political subdivision shall have the manpower or other capability to maintain the applicable conditions of the SDMP, this certification shall become a part of the subsurface soil absorption system permit.
- D. Proper easements shall be provided for drainage to assure access for proper maintenance.
- E. Political subdivisions shall assure proper installation and maintenance of the stormwater and groundwater drainage system(s).
- F. The department retains the right to reject any SDMP if in the opinion of the department the SDMP proposed will result in a nuisance or health hazard condition.

NOTE: The foregoing was based on "Commonwealth of Virginia/State Board of Health" SEWAGE HANDLING & DISPOSAL REGULATIONS.