ARTICLE 1. General Provisions.

Section 68.1-1-1. Title.

This Chapter shall be known and cited as "The Individual Sewage Disposal Facilities Code" of Fairfax County, Virginia. (35-03-68.)

Section 68.1-1-2. Purpose.

This Chapter shall be applied to protect public health and the environment through locating, designing, inspecting, and approving functional individual sewage disposal facilities and the licensing/registration of sewage disposal facility contractors, sewage handlers, and system maintenance providers. (35-03-68.)

Section 68.1-1-3. Penalties.

It shall be unlawful for a person to fail to comply with any provision of this Chapter. A person who violates any provision of this Chapter by doing a prohibited act, or failing to perform a required act, or by failing to perform permitted acts in the prescribed manner shall be deemed guilty of a Class 2 misdemeanor. Each day any violation of this Chapter shall constitute a separate offence. (35-03-68.)

Section 68.1-1-4. Adoption of the Commonwealth of the Virginia State Board of Health Sewage Handling & Disposal Regulations.

Parts I through V, inclusive, and all forms and appendices of the Commonwealth of Virginia State Board of Health Sewage Handling & Disposal Regulations, hereafter referred to as the "Regulations", including the modifications of the Regulations that are set out in Section 68.1-1-6, are hereby adopted and incorporated in their entirety into this Chapter as if fully set forth herein. In the event of conflict or inconsistency between this Chapter and the Sewage Handling & Disposal Regulations, the provisions ofthis Chapter shall control. When used in the Sewage Handling & Disposal Regulations, the term "Health Authority" shall mean the Director, as defined in Section 68.1-1-5 of this Chapter. (35-03-68.)

Section 68.1-1-5. Definitions.

The following words and phrases, when used in this Chapter, including the incorporated Sewage Handling & Disposal Regulations, have the meanings given below, unless the context clearly indicates a different meaning:

> *Administrative Authority* means the Fairfax County Director of Health Services or the duly authorized representative.

Alternative System means any approved ground absorption sewage treatment and disposal system other than an approved septic tank system.

Authorized System means water carried disposal to an individual sewage disposal system approved by the Administrative Authority.

ASTM means American Standards of Testing and Measurement.

Board of Supervisors means the Board of Supervisors of Fairfax County, Virginia.

Building Official means the Director of the Office of Building Code Services, or their duly authorized representative charged with the administration and enforcement of the Virginia Uniform Statewide Building Code.

Director means the Director of the Fairfax County Department of Health Services or the designee of the Director.

Experimental or special design system means sewage treatment and disposal methods, processes, and equipment, which
(i) are not covered by criteria in Part IV of the Regulations and which
(ii) in principle and/or application are new or unconventional and
(iii)are not approved by the Administrative Authority.

Individual sewage disposal system means a complete system for collection, treatment, and disposal of sewage designed not to result in a point source discharge.

Installed, repaired, expanded, approved and standard means in accordance with the specifications and standards established within this Article.

Malfunction means when an individual sewage disposal system no longer performs its design function, including but not limited to events when effluent surfaces on the ground surface, backs up into the building sewer line or pollutes the ground water.

Percolation test means a water test at a depth of the proposed soil absorption system to determine the rate that water will permeate the soil under saturated conditions as described in Appendix G of the Regulations.

Portable or temporary toilet means a non-water-carriage device, housed in a structure manufactured as a single unit that affords privacy to the user, is easily transported, and contains a vault for the temporary collection and storage of human excrement.

Privy means an earth pit or vault for receiving non-water carried human wastes.

Pump-out means the removal of the contents of a septic tank or other pretreatment system by a licensed sewage handler.

Receiving Area means the area adjacent to and down slope from the absorption area, which will absorb lateral flow of sewage effluent. The area may vary in size depending on the degree of slope, soil texture, permeability, topographical features, and linear loading rates for the design of the proposed system.

Sand filter means a secondary sewage treatment device or structure, constructed at, above or below the surface of the ground, for removing solid or colloidal material of a type that is not removed by sedimentation in the pretreatment system.

Septic tank system means a subsurface wastewater system consisting of a settling tank and a subsurface disposal field.

Sewage treatment works means any device or system used in the storage, treatment, disposal or reclamation of sewage and industrial wastes, including but not limited to pumping, power and other equipment and appurtenances, septic tanks and any works, including land, that are, or will be an integral part of the treatment process or used for ultimate disposal of residues or effluent resulting from such treatment.

Soil evaluation means an evaluation of both the surface characteristics and the soil profiles on a proposed site for an individual sewage disposal system or treatment works to determine its suitability for the proposed use. Surface evaluation shall include such characteristics as landscape position, degree of slope, surface drainage patterns, indications of disturbance, stoniness, etc. Soil profile descriptions shall include such factors as color, texture, consistency, depth to rock, seasonal and permanent water tables, internal drainage restrictions, etc.

Subsurface soil absorption pit means a system comprised of round, square, or rectangular excavations that are greater than 36 inches in width or diameter installed within the soil and designed to accommodate treated sewage from a treatment works. (35-03-68.)

Section 68.1-1-6. Modifications to Sewage Handling and Disposal Regulations.

The following sections of the Commonwealth of Virginia State Board of Health Sewage Handling & Disposal Regulations, as incorporated into the Code of the County of Fairfax, Virginia are adopted with the following changes:

Section 12 VAC 5-610-240. *"Permits; general"* is adopted with the following changes.

C. Fees. A fee, in accordance with the fee schedule established in Section 68.1-9-1, shall be paid to the County of Fairfax at the time of any application. A separate fee shall be imposed when an applicant requests a change in the approved location of the individual sewage disposal system. No fee shall be required for the repair or replacement of an existing malfunctioning system. A construction permit issued pursuant to this Section shall be valid for a period of 18 months and may be revalidated in writing bythe Administrative Authority with the imposition of an additional fee.

D. When site conditions change or the needs of an applicant change such that a new site evaluation must be conducted, a new application and a site development plan review fee, in accordance with the fee schedule established in Section 68.1-9-1, is required.

E. The presence of sewage disposal systems that utilize a device for treating sewage to secondary effluent standards or better shall be recorded for the property in the Grantor Index of the land records maintained by the Fairfax County Circuit Court.

Section 12 VAC 5-610-250. *"Procedures for obtaining a construction permit for a sewage disposal system"* is adopted with the following changes.

I. Special requirements for certain sewage disposal systems. A construction permit for a single sewage disposal system proposed to serve a dwelling unit with multiple living units or multiple dwelling units on a single lot shall be issued only to a single owner. The owner shall provide legal documentation to assure operation and the maintenance of the system for the expected life of the living units or dwellings.

Section 12 VAC 5-610-280. *"Issuance of the construction permit"* is adopted with the following changes.

A. A construction permit may be issued by the commissioner after approval of the application submitted under 12 VAC 5-610-250 A and D.
B. A construction permit may be issued by the commissioner after approval of the application and plans and specifications submitted under 12 VAC 5-610-250 B and **C.** Such approvals shall include applicable requirements of the Department of Environmental Quality in accordance with § 32.1-164.3 of the Code of Virginia.

Section 12 VAC 5-610-360. *"Review of subdivision plats for individual sewage disposal systems when required by local ordinance"* is adopted with the following changes.

D. Before building construction begins on a lot within the subdivision, the property owner shall obtain a valid building permit from the Fairfax County Department of Public Works and Environmental Services.

Section 12 VAC 5-610-441. *"Special permits for experimental methods, process, and equipment"* is adopted with the following changes.

A. New construction. Sewage treatment and disposal methods, processes, and equipment which (i) are not covered by criteria in Part V (12 VAC 5-610-660 et seq.) of this chapter and (ii) in principle and/or application are new or unconventional are subject to a special permitting procedure in lieu of that set forth in 12 VAC 5-610-250. All applications for such processes, methods, and equipment shall be made to the division through the district or local health department. Any system that the Regulations regard as experimental shall not be considered for new construction unless a generally approved sewage disposal system, as described in the Regulations, with 100% reserve is approved as backup.

Section 12 VAC 5-610-446. *"Permits for constructing and operating provisionally approved systems"* is adopted with the following changes.

A. Construction permit application. Homeowners can apply for a construction permit to install a provisionally approved system in the same manner provided for in 12 VAC 5-610-250 for Type II or Type III systems depending upon the nature of the provisional approval granted by the commissioner. Appeals from the denial of a permit application for a provisionally approved system shall conform to the requirements of 12 VAC 5-610-210. Provisionally approved systems shall not be considered for new construction unlessa generally approved sewage disposal system, as described in the Regulations, with 100% reserve is approved as backup.

Section 12 VAC 5-610-490. *"Characteristics of soils that determine suitability"* is adopted with the following changes.

C. 2. e. Unsatisfactory absorption rate. Soils having an estimated or measured percolation rate or equivalent, greater than 120 minutes/inch are unsatisfactory for installation of absorption systems.

Section 12 VAC 5-610-560. *"Sewage handling; general"* is adopted with the following changes.

E. Sewage handlers written report. Sewage handlers shall provide the Administrative Authority with a written log of all tanks in the County from which they have removed septage. This log shall be submitted monthly to the Administrative Authority and shall include:

- Company name and license number
- Truck number
- Date pumped
- Owner's name
- Street address of the property served
- Number of gallons pumped
- Fairfax County property identification number
- Disposal site

Section 12 VAC 5-610-593. *"Physical features"* is adopted with the following changes.

3. Slope. Subsurface soil absorption trench systems shall not be place on slopes greater than 25 percent. Criteria for other types of onsite systems are contained in Tables 4.3 and 4.4.

Section 12 VAC 5-610-594. *"In-ground systems"* is adopted with the following changes.

A. An in-ground system is a system, which utilizes a natural, undisturbed soil horizon to treat and disperse effluent where the infiltrative surface is placed 22 inches or more beneath the original surface of the ground. In-ground systems include, but are not limited to, conventional septic tank drainfield systems, chamber systems, alternative aggregate systems, enhanced flow systems, and pressure dosed systems.

Section 12 VAC 5-610-596. *"Shallow-placed systems"* is adopted with the following changes.

A. Shallow-placed systems are systems, which utilize a natural, undisturbed soil horizon to treat and disperse effluent where the infiltrative surface is placed at a depth greater than or equal to 6 inches but less than 22 inches from the original soil surface. Also see Table 4.3. Shallow-placed systems may use the system designs similar to in-ground systems; however, timed dosing shall be used to disperse the effluent.

C. 1. Soil texture. In order to assure effluent dispersal under adverse conditions while maintaining adequate treatment capacity, shallow-placed systems installed shallower than 12 inches are limited to Texture Group I and II soils. Any soil texture group may be utilized for absorption trench systems installed between 12 and 22 inches.

D. Site Evaluation.

1. All proposed shallow-type onsite sewage disposal systems must be evaluated during months that meet or exceed the long-term monthly composite average rainfall from Washington Dulles International Airport and Ronald Reagan Washington National Airport.

2. When water table monitoring wells are required as part of the site evaluation, the wells must be monitored during months that meet or exceed the long-term monthly composite average rainfall from Washington Dulles International Airport and Ronald Reagan Washington National Airport.

3. Hydraulic conductivity testing shall be required for proposed installation depths of less than 18 inches in conjunction with the standard soil profile hole evaluations. Proposed installation depths of 18 inches or greater may be evaluated by percolation testing as described by Appendix G of the Regulations.

4. A soil test pattern consisting of a minimum of 16 profile holes on 25 foot centers within a 100 foot X 100 foot grid area must be bored at a depth of 2 feet greater than the recommended/estimated installation depth of the absorption trench/bed zone when evaluating sites for surface bed installations or shallow placed systems. Peat filtration module bed areas do not require this soil test pattern but will be evaluated on a case-by-case basis for the number of test holes required.

5. A minimum of 5 hydraulic conductivity test sites or percolation holes are required per site. Any portion of the site area will be void if any of the hydraulic conductivity test sites or percolation holes exceed a percolation rate of 120 minutes per inch for installations equal to or greater than 12 inches and 45 minutes per inch for installations less than 12 inches.

E. Site Protection.

1. Sites being considered for a shallow-type onsite sewage disposal system shall not be disturbed prior to the site evaluation. Site disturbance includes but is not limited to grading, filling, tree or shrub removal, and vehicular or equipment traffic.

2. The approved absorption, reserve, and receiving areas must be placed into an onsite sewage protection area to be delineated on all plats and permits.

3. The approved areas must be properly protected after the sites have been approved. This may include but is not limited to staking/flagging the perimeter of the test sites or installing any appropriate barrier to

prevent vehicular traffic. Sites may be deemed unacceptable if compromised by vehicular traffic, grading, filling, etc.

4. The owner or agent is responsible for assuring that the approved test site remains protected prior to and during construction or development of the site.

5. The permit for shallow onsite sewage disposal systems shall be a "Conditional Permit" due to unique maintenance requirements specific to these systems. "Conditional Permits" and associated plats must be recorded for the property in the Grantor Index of the land records maintained by the Fairfax County Circuit Court.

F. Site Development.

1. The Fairfax County Health Department shall conduct a site inspection to confirm conditions in the immediate installation area(s) before construction is initiated on the shallow-type onsite sewage disposal system.

2. No construction shall be allowed during wet periods when the surface area of the shallow-type onsite sewage disposal system is moderately to excessively wet as determined by the Administrative Authority.

3. Shallow-type onsite sewage disposal system absorption areas shall have a minimum of 12 inches of cover and be stabilized with a grass sod cover unless installed in a wooded location.

G. Site Maintenance.

1. After the shallow-type onsite sewage disposal system has been installed and approved, it is the owner's responsibility to maintain and protect the system.

2. In cases of system malfunction, a written repair permit is required from the Fairfax County Health Department. No work is to be initiated without prior authority from the Fairfax County Health Department and the manufacturer/distributor of the pretreatment equipment.

3. Lawn sprinklers or similar type of water distribution systems shall not be installed on or closer than 10 feet from any portion of the shallow-type onsite sewage disposal systems.

4. The system designer or engineer shall provide an operations and maintenance manual with system design plans and specification and a completion statement to the Administrative Authority and to the property owner.

Table 4.1.
Minimum Separation Distances for Pretreatment Units, Conveyance Lines, and Header Lines.

TABLE INSET:

Structure or Topographic Features	Minimum Horizontal Distance
Property Lines	10
Building Foundations	10
Basements	20
Drinking Water Wells (all classes)	50
Cisterns (Bottom Elevation Lower than Ground Surface in Area of Pretreatment Unit)	100
Shellfish Waters	70
Natural Lakes & Impounded Waters and Streams	50
Developed Springs (when the spring is down slope)	100
Drainage Ditches:	
Ditch Bottoms above Seasonal Water Table	10
Ditch Bottom below Seasonal Water Table and Ditch Normally Contains Water	50
Lateral Ground Water Movement Interceptor	50
Low Point of Sink Holes When Placed within the Bowl of the Sink Hole	100
Swimming Pools	20
Utility Lines	10

Table 4.2.
Minimum Separation Distances.

TABLE INSET:

Structure or Topographic Features	Soil Texture Group	Minimum Distance (Ft) from Bottom or Sidewall of Subsurface Soil Absorption System Trench	
		Vertical	Horizontal
Property Lines	I, II, III,	--	10

	IV		
Building Foundations	I, II, III, IV	--	10
Basements	I, II, III, IV	--	20
Drinking Water Wells			
Class I & II	I, II, III, IV	--	100
Class III	I, II, III, IV	--	100
Cisterns (Bottom Elevation Lower than Ground Surface in Area of Subsurface Soil Absorption System)	I, II, III, IV	--	100
Shellfish Waters	I, II, III, IV	--	70
Natural Lakes & Impounded Waters	I, II, III, IV	--	50
Streams	I, II, III, IV	--	50 a
Developed Springs (Up slope)	I, II, III, IV	--	200 e
Rock and Rock Outcropping	I		2
Rock and Rock Outcropping	II, III, IV	1.5	1.5
Pans and Impervious Strata	I, II, III, IV	1.5	1.5
Drainage Ditches			
Ditch Bottoms Above Seasonal Water Table	I, II, III, IV	--	10
Ditch Bottom Below Seasonal	I	--	70 a
Water Table and Ditch Normally	II	--	70 a
Contains Water	III	--	50 a
	IV	--	50 a
Water Table Depressor System	I	6 b	70
	II	3 b	70

	III	2 b	50
	IV	2	50
Lateral Ground Water	I	--	70 c 10 d
Movement Interceptor	II	--	70 c 10 d
	III	--	50 c 10 d
	IV	--	50 c 10 d
Low Point of Sink Holes When Placed within the Bowl of the Sink Hole	I, II, III, IV	--	100
Utility Lines	I, II, III, IV	--	10
Irrigation Lines	I, II, III, IV	--	10

a The set back distance may be reduced to 10 feet in Group III and IV soils and 20 feet in Group I and II soils if the subsurface soil absorption system is designed to produce unsaturated flow condition in the soil.

b Vertical Distance to the invert of the drain tile in the water table depressor system.

c Absorption trench up slope from interceptor.

d Absorption trench down slope from interceptor.

e Arc of 180 degree up slope of spring and 100 ft. down slope.

Table 4.3.
Summary of Separation Distances between Systems Using Naturally Occurring Undisturbed Soils and Limiting Site Factors.
TABLE INSET:

Site Factor	In-Ground System 1		Shallow-placed System 1	
	Septic Tank Effluent	Secondary Effluent	Septic Tank Effluent	Secondary Effluent
Bed Rock	18"	12"	n/a	18"
Restriction	18"	12"	n/a	18"
Shrink-Swell	18"	12"	n/a	18"

Soil				
Slope	25%	25%	n/a	25%
Perc Rate	5-120 mpi	5-120 mpi	n/a	5-45 mpi
Water Table	18"	12"	n/a	12"

1 The separation distances for in-ground and shallow-placed systems are measured from the trench bottom or other infiltrative interface vertically down to listed site factor.

Table 4.4.
Summary of Separation Distances between Fill Systems and Limiting Site Factors.

TABLE INSET:

Site Factor	Elevated Sand Mound		Sand-on-Sand System 2		Noncarbonaceous Mountain Colluvium	
	Septic Tank Effluent	Secondary Effluent	Septic Tank Effluent	Secondary Effluent	Septic Tank Effluent	Secondary Effluent
Bed Rock	24" 1	24" 1	60"	60"	18"	12"
Restriction	24"	12"	30"	24"	18"	12"
Shrink-Swell Soil	24"	12"	40"	30"	18"	12"
Slope	25%	25%	5%	5%	25%	25%
Perc Rate	5--120 mpi	5--120 mpi	5--30 mpi	5--30 mpi	5--120 mpi	5--120 mpi
Water Table	24"	10"	18"	12"	18"	12"

1 24 inches refers to creviced bedrock. This distance may be reduced to 12 inches when noncreviced bedrock is encountered. See the Wisconsin Mound Soil Absorption System Siting, Design, and Construction Manual, January 1990.

2 The separation distance for sand-on-sand systems is measured from the ground surface vertically down to the listed site factor.

Section 12 VAC 5-610-670. *"Sewage flows"* is adopted with the following changes.

The sewage disposal system for a dwelling greater than 7,500 square feet of building area, excluding the garage, shall be designed as a pumping system utilizing flow equalization by time dosing with the flow equalization zones

equal to twice the daily design flow, a septic tank sized 50% larger than the design described in section 12 VAC 5-610-815, and the installation of a flow measurement device. Subsurface soil absorption systems shall be designed on the basis of the sewage flows tabulated in Table 5.1.

Section 12 VAC 5-610-680. *"Water saving plumbing devices"* is adopted with the following changes.
Water saving plumbing devices are encouraged to lengthen the life of the subsurface soil absorption system. However, water saving plumbing devices such as low flush toilets and inserts in showers shall not be considered in reducing the size of the absorption area.

Section 12 VAC 5-610-700. *"Site preparation and alteration"* is adopted with the following changes.

E. 1. No structure, including but not limited to deck, patio, driveway, or parking lot shall be placed over the subsurface absorption system. This prohibition does not apply to forcemains, conveyance line(s), or building sewer(s) properly protected as determined by the Administrative Authority.

2. The onsite sewage disposal system is an integral part of the principal use of the property and, therefore shall be located on the same lot as the principal use and within a zoning district that permits the principal use served by the system in accordance with the Fairfax County Zoning Ordinance.

4. The following site protection activities shall be implemented for the following type systems:

a. Raised Filter Bed Systems. Do not disturb in any manner the designated Raised Filter Bed Systems area (including mantle area) by clearing or by the operation of any equipment or vehicles. Any work under consideration on the Raised Filter Bed Systems site(s), whether to be done directly or indirectly, must first be reviewed and approved by the Fairfax County Health Department.

b. Low Pressure Distribution. Do not disturb in any manner the designated LPD area(s) by clearing or by the operation of any equipment or vehicles during wet weather. No site preparation or construction work should occur in the designated LPD area(s) if the soil is wet. The use of heavy equipment in the LPD area(s) is not allowed unless authorized by the Fairfax County Health Department.

c. Wisconsin Mound. Do not disturb in any manner the designated mound area(s) 75 feet directly below the mound sites by clearing or by the operation of any equipment or vehicles. If the owner/developer is considering changes to the site(s), they must notify the Fairfax County Health Department and receive the proper authorization before initiating

any work. Any work under consideration on the mound site(s), directly or indirectly, must first be reviewed and approved by the Fairfax County Health Department.

d. Peat Filtration. Do not disturb in any manner the designated peat filtration areas by clearing or by the operation of any equipment or vehicles. Any work under consideration on the peat filtration site(s), directly or indirectly, must first be reviewed and approved by the Fairfax County Health Department.

Section 12 VAC 5-610-710. *"Reserve absorption area sites"* is adopted with the following changes.

All lots established after August 1, 2003, within Fairfax County are required to provide a minimum reserve area equaling at least 100% of the required absorption area except for a replacement or repair of an existing malfunctioning septic system if space is unavailable.

Section 12 VAC 5-610-730. *"Minimum size"* is adopted with the following changes.

Sewers shall have a minimum internal diameter (ID) of four inches. Larger sewers may be required depending on projected flows.

Section 12 VAC 5-610-740. *"Slope"* is adopted with the following changes.

The minimum slope for four-inch sewers is 1 1/4 inches per 10 feet, and for a six-inch sewer is 3/4 inches per 10 feet.

Section 12 VAC 5-610-815. *"Septic tank design"* is adopted with the following changes.

D. Top access and watertightness. All septic tanks shall be watertight and shall be provided with a watertight top. As a minimum, access manholes shall be provided over the inlet and outlet structures and shall have a minimum open space of 18 inches by 18 inches. The maximum coverage over a septic tank shall not exceed 48 inches. An access manhole shall be brought to within 20 inches of the final grade at the inlet lid and to the final grade at the outlet lid. Each pre-cast concrete tank shall be embossed or stenciled with the name of the manufacturer and the liquid capacity in gallons in four-inch or large size letters and numbers on the top of the tank or the inlet end of the tank above the inlet opening. Manhole covers shall restrict surface water entry.

E. Construction of septic tanks. The contractor and/or manufacturer shall design and construct the septic tank to withstand the lateral and bearing loads to which the septic tank is expected to be subjected. A top-seam septic tank shall be utilized whenever watertable soils are present at the installation depth of the septic tank.

Section 12 VAC 5-610-817. *"Maintenance"* is adopted with the following changes.

A. In order to encourage proper maintenance and reduce the likelihood of solids being discharged to an absorption field, all septic tanks constructed after July 1, 2000, shall be designed to have an effluent filter as provided for in subsection C of this section, or be designed for reduced maintenance as provided for in subsection D of this section.

E. Any systems that utilize a device for treating sewage to secondary effluent standards or better shall have a monitoring and maintenance contract with a service provider authorized by the sewage disposal system treatment plant manufacturer to perform such maintenance and is accredited by the National Sanitation Foundation or hold a Class IV Wastewater Works Operator's license issued by the Board for Waterworks and Wastewater Works. Such maintenance and monitoring contracts shall be required for the life of the system.

F. Pump-Out. All individual sewage treatment and disposal systems not requiring a Virginia Pollutant Discharge Elimination System (VPDES) permit shall have pump-out of the septic tank accomplished a minimum of once every five years.

G. Pump-Out Notification. The owner of any individual sewage treatment and disposal system shall notify the Administrative Authority in writing within ten days after the pretreatment system (septic tank) and/or distribution box(es) are pumped for any reason. The written notification shall contain:

- Owner's name
- Owner's phone number
- Street address of the property
- Owner's mailing address if different from the property
- Fairfax County property identification number
- Date the tank was pumped
- Number of gallons pumped
- Name of the sewage handler

The owner may accomplish this notification by providing to the Administrative Authority a copy of a form provided to the owner by the sewage handler if the form contains the required information.

H. Failure to accomplish pump-out.

1. After receipt of a written notice of violation, it is unlawful for the owner or other person or persons to fail to accomplish pump-out of the disposal system as required in this section within 30 days.

2. If the written notice is undeliverable, or in the case of an absentee owner who cannot be notified, or if after receipt of the written notice the

owner fails to accomplish pump-out as required in this section, the Administrative Authority may request the Director of Public Works and Environmental Services to accomplish the pump-out, regardless of whether the premises are occupied. If the owner, occupant, or other person responsible for the premises denies free access for this purpose, the Administrative Authority may proceed after obtaining a warrant. Cost and expenses incurred by the Administrative Authority in accomplishing the pump-out shall be assessed against the owner of the property and shall be recoverable from the owner in the same way as taxes and levies.

Section 12 VAC 5-610-870. *"Gravity effluent mains"* is adopted with the following changes.

A. Size. Mains transporting effluent by gravity shall have a minimum internal diameter of four inches.

E. Flow diversion devices. Flow diversion is a technique for increasing the useful life of an absorption area. Flow diversion provides for diversion of flow to two alternate equally sized absorption areas whose sum meets the area requirement in 12 VAC 5-610-950 B with a rest period of approximately one year for recovery of each absorption area. These devices shall meet the material requirements contained in paragraph D 3 of this section. There shall be a flow diversion valve, approved by the Administrative Authority, located between the septic tank and the distribution boxes, except for repair situations when installation of a valve is not feasible and for any other approved system for which the use of a valve would adversely affect the design of the system, as determined by the Administrative Authority. The owner of any individual sewage disposal system equipped with a flow diversion valve shall turn the valve every twelve months to allow the yearly resting of half of the absorption field.

Section 12 VAC 5-610-880. *"Pumping"* is adopted with the following changes.

B. 3. Access. An access manhole terminating at least 12 inches above the ground surface shall be provided. The manhole shall have a minimum width dimension of 30 inches and shall be provided with a shoebox type cover adequately secured.

6. Pumps. All pumps utilized shall be of the open face centrifugal type designed to pump sewage. Pumps utilized for the sole purpose of pumping effluent to a higher elevation shall have a capacity of 2.5 times the average daily flow in gallons per minute but not less than 40 gallons per minute at the system head. Pumps utilized for the purpose of enhancing flow distribution (See 12 VAC 5-610-930 A) shall have a minimum capacity of 40 gallons per minute at system head per 1,200 linear feet of percolation piping. All pumps shall be installed on a 4-inch

pedestal or block to keep out sludge. Pumps discharging to a low-pressure distribution system shall be sized in accordance with 12 VAC 5-610-940 A. Dual alternating pumps are required on all systems. Each pump shall be so placed that under normal start conditions it shall be subjected to a positive suction head. Each pump shall have its own separate suction line. Suitable shutoff valves shall be provided on the discharge lines and suction lines (if provided) for normal pump isolation. A check valve shall be placed in the discharge line between the pump and the shutoff valve. When the pump discharge is at a lower elevation than the high liquid level in the pump station, an antisiphon device shall be provided on the pump discharge. Pumps shall be piped so that they can be removed for servicing without having to dewater the wet well. All pumps used for secondary or better treated effluent may be of the open face centrifugal type or turbine type pumps that are rated forthe effluent quality. Pumps utilized must have a minimum capacity of 21 gallons per minute and a maximum capacity of 80 gallons per minute at system head.

10. Effluent Flows. All pumping systems shall require an effluent flow measurement device.

Section 12 VAC 5-610-930. *"Gravity distribution"* is adopted with the following changes.

Gravity distribution is the conveyance of effluent from a distribution box or distribution manifold through the percolation lines at less than full flow conditions. Flow to the initial distribution box may be initiated by pump, siphon or gravity. Flow to the distribution manifold may be initiated by pump or siphon.

A. Enhanced flow distribution. Enhanced flow distribution is the initiation of the effluent flow to the distribution box or distribution manifold by pump or siphon for the purpose of assuring more uniform flow splitting to the percolation lines. Enhanced flow distribution shall be provided on systems where the flow is split more than 12 times. When utilizing a flow diversion valve, if the system contains more than 1200 linear feet of percolation lines per half, distribution shall be by means of a distributionmanifold. For the purpose of this chapter, enhanced flow distribution is considered to produce unsaturated soil conditions.

D. Lead or header lines. Header or lead lines are watertight, rigid lines that convey effluent from a distribution box to another box or to the percolation piping.

E. 6. a. Crushed stone or gravel. Clean gravel or crushed stone having a size range from 1/2 inch to 1 1/2 inches shall be utilized to bed the gravity percolation lines.

b. Minimum depth of gravel or crushed stone beneath the percolation lines shall be eight inches. Clean course silica sand (does not effervesce in the presence of dilute hydrochloric acid) may be substituted for the first two inches (soil interface) of the required eight inches of gravel beneath the percolation lines. The absorption trench shall be backfilled to a depth of two inches over the gravity percolation lines with the same gravel or crushed stone. Clean sand, gravel, or crushed stone shall be free of fines, clay, and organic materials.

c. Placement and alignment. Perforated gravity percolation piping shall be placed so that the center hole is in the horizontal plane and interfaces with the minimum eight inches of graded gravel. When open joint piping is utilized the upper half of the top of the 1/4-inch open space shall be covered with tar paper or building paper to block the entrance of fines into the pipe during the backfilling operation. All gravity percolating piping shall be placed in the horizontal center of the absorption trench andshall maintain a straight alignment and uniform grade.

d. Backfilling. After the placement of the gravity percolation piping the absorption trench shall be backfilled evenly with crushed stone or gravel to a depth of two inches over the piping. Untreated building paper or other suitable material shall be placed at the interface of the gravel and soil to prevent migration of fines to the trench bottom. A minimum of 12 inches and a maximum of 20 inches of clean backfill shall be placed over the gravel.

Section 12 VAC 5-610-940. *"Low pressure distribution"* is adopted with the following changes.

B. 5. Valves. Globe valves for throttling and check valves to prevent backflow are required wherever necessary. Each valve shall be supplied with a valve box terminating at the ground surface. A flow diversion valve shall not be used on a low pressure distribution system.

C. 7. c. Placement and alignment. Pressure percolation lines shall be placed so that the holes face vertically downward. All pressure percolation piping shall be placed at the same elevation, unless throttling valves are utilized, and shall be level. The piping shall be placed in the horizontal center of the trench and shall maintain a straight alignment. Normally the invert of the pressure percolation lines shall be placed at least 8 1/2 inches above the trench bottom. However, under no circumstance shall theinvert of the pressure percolation lines be placed closer than 16 1/2 inches to the seasonal water table as defined in 12 VAC 5-610-950 A 3. When the invert of the pressure percolation lines must be placed at an elevation greater that 8 1/2 inches above the trench

bottom, landscaping over the absorption area may be required to provide the two inches of gravel and minimum 12 inches of fill over the pressure percolation lines required in subdivision 7a of this subsection.

d. Backfilling. After placement of the pressure percolation piping the absorption trench shall be backfilled evenly with crushed stone or gravel to a depth of two inches over the opening. Untreated building paper or other suitable material shall be placed at the interface of the gravel and soil to prevent migration of fines to the trench bottom. A minimum of 12 inches and a maximum of 20 inches of clean backfill shall be placed over the gravel.

Section 12 VAC 5-610-950. *"Absorption area design"* is adopted with the following changes.

E. 1. Depth. The minimum trench sidewall depth as measured from the surface of the mineral soil shall be 22 inches when placed in a landscape with a slope less than 10 percent. The installation depth shall be measured on the downhill side of the absorption trench. When the installation depth is less than 22 inches, the depth shall be measured from the lowest elevation in the microtopography. All systems shall be provided with at least 12 inches of cover to prevent frost penetration and provide physical protection to the absorption area. Where additional soil cover must be provided to meet this minimum, it must be added after the construction of the absorption area, and it must be crowned to provide positive drainage away from the absorption area. The minimum trench depth shall be increased by at least five inches for every 10 percent increase in slope. Sidewall depth is measured from the ground surface on the downhill side of the trench. Any septic system with trench sidewall depths greater than 120" shall utilize a device for treating sewage to secondary effluent standards or better.

2. Width. All absorption trenches utilized with gravity distribution shall have a width of 24 inches. All absorption trenches utilized with low-pressure distribution shall have a width of 24 inches.

F. Lateral separation of absorption trenches. In no case shall the center to center distance be less than 72 inches.

24 Inch Wide Trenches

TABLE INSET:

Slope (%)	Horizontal Separation Distance (inches)
0--19	72
20--25	84

Section 12 VAC 5-610-1030. *"Vehicle identification"* is adopted with the following changes.

The name, address, and telephone number of the owner shall be displayed on each side of the vehicle in letters at least four inches high. In addition, the sewage handling permit number shall be displayed immediately beneath the owner's name and address and in plain sight.

Section 12 VAC 5-610-1080. *"Anaerobic lagooning of septage"* is not adopted.

Section 12 VAC 5-610-1090. *"Lime stabilization of septage"* is not adopted.

Section 12 VAC 5-610-1100. *"Storage facilities for unstabilized septage"* is not adopted.

Section 12 VAC 5-610-1140. *"General"* is not adopted. (35-03-68.)

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