

DIVISION OF ENVIRONMENTAL HEALTH
BUREAU OF ONSITE SEWAGE PROGRAMS
RULE 64E-6, FLORIDA ADMINISTRATIVE CODE

AMENDING SECTIONS 64E-6.001, 64E-6.002, 64E-6.003, 64E-6.004, 64E-6.005, 64E-6.008, 64E-6.009, 64E-6.010, 64E-6.0101, 64E-6.013, 64E-6.014, 64E-6.015, 64E-6.016, 64E-6.017, 64E-6.018, 64E-6.0181, 64E-6.025, 64E-6.026, 64E-6.027, 64E-6.028, AND 64E-6.030

64E-6.001 General.

(1) The provisions of Part I of this chapter shall apply to all areas of the state except where specific provisions of law or other parts of this chapter provide a specific exemption or modification to those provisions. The provisions of this chapter must be used in conjunction with Chapter 381, ~~and~~ Part III, Chapter 489, F.S., [and the Interagency Agreement Between The Department of Environmental Protection and The Department of Health for Onsite Sewage Treatment and Disposal Systems, September 10, 2001, herein incorporated by reference.](#)

(2) Structures used or intended for human occupancy, employment or service to the public and locations where people congregate, such as construction sites, fairs, [housing for displaced persons](#), and field locations for agricultural workers shall provide approved wastewater treatment and disposal systems. Except for the provisions of Rule 64E-6.0101, permanent structures shall not rely upon the use of holding tanks and portable toilets for wastewater treatment and disposal.

(3) No change

(4) Except as provided for in Section 381.00655, F.S., any existing and prior approved system which has been placed into use and which remains in satisfactory operating condition shall remain valid for use under the terms of the rule and permit under which it was approved. Alterations that change the conditions under which the system was permitted and approved, sewage characteristics or increase sewage flow will require that the owner, or their authorized representative, apply for and receive reapproval of the system by the DOH county health department, prior to any alteration of the structure, or system. If an applicant requests that the department consider the previous structure's or establishment's most recent approved occupancy, the applicant must provide written documentation that the onsite sewage treatment and disposal system was approved by the department for that previous occupancy. An applicant will be required to complete Form DH 4015, 08/09, Application for Construction Permit, herein incorporated by reference, and provide a site plan in accordance with paragraph 64E-6.004(3)(a), F.A.C., to provide

information of the site conditions under which the system is currently in use and conditions under which it will be used. The applicant shall have all system tanks pumped by a permitted septage disposal service. A registered septic tank contractor, state-licensed plumber, person certified under Section 381.0101, F.S., or master septic tank contractor shall determine the tank volume and shall perform a visual inspection of the tank when the tank is empty to detect any observable defects or leaks in the tank. The tank volume shall be obtained from the tank legend or shall be calculated from measured internal tank dimensions for length, width and depth to the liquid level line or from the measured outside dimensions for length and width minus the wall thickness and depth to the liquid level line. For odd shaped tanks and tanks without a legend, metered water flows from the refilling of the tank may be used in lieu of measured inside or outside tank dimensions. The person performing the inspection shall submit the results to the DOH county health department as part of the application using page 4 of Form DH 4015. If a prior approved existing system has been approved by the DOH county health department within the preceding three years, and the system was determined to be in satisfactory operating condition at that time, a new inspection is not required unless there is a record of failure of the system. If it is determined that a new inspection is not required, only the application fee shall be charged for this application and approval. A commercial system out of service for more than one year shall be brought into full compliance with current requirements of this chapter prior to the system being placed into service. If the use of a building is changed or if additions or alterations to a building are made which will increase domestic sewage flow, change sewage characteristics, or compromise the integrity or function of the system, the onsite sewage treatment and disposal system serving such building shall be brought into full compliance with the provisions and requirements of these rules. Proper well setbacks shall be maintained. Prior to any modification of the system, the owner shall apply for and obtain a permit for modification of the system from the county health department in accordance with Rule 64E-6.004, F.A.C. The permit shall be valid for 18 months from the date of issue. Where building construction has commenced, it shall be valid for an additional 90 days. Necessary site investigations and tests shall be performed at the expense of the owner by [persons authorized to do such work in subsection 64E-6.004\(3\), F.A.C.](#) ~~either an engineer with soils training who is licensed in the state of Florida pursuant to Chapter 471, F.S., registered septic tank contractors, master septic tank contractors, or persons certified under Section 381.0101, F.S., or department personnel for the appropriate fee specified in Section 381.0066, F.S.~~

(5) through (6) No change

[\(7\) As used throughout this chapter, the term "engineer" refers to a professional engineer who is licensed in the](#)

(7) renumbered as (8) No change

Rulemaking Authority 381.0065(3)(a), 489.553(3), 489.557(1) FS. Law Implemented 381.0065, 381.0067, 386.041, 489.553 FS. History—New 12-22-82, Amended 2-5-85, Formerly 10D-6.41, Amended 3-17-92, 1-3-95, 5-14-96, 2-13-97, Formerly 10D-6.041, Amended 11-19-97, 2-3-98, 3-22-00, 9-5-00, 5-24-04, 11-26-06, 6-25-09, 4-28-10, _____. 64E-6.002 Definitions.

For the purposes of this chapter, the following words and phrases shall have the meanings indicated:

(1) through (10) No change

(11) Bedroom – A room that is listed as descriptive of the residence if the residence was on the market for sale or rent and that can be used for sleeping, which is located along an exterior wall, has an emergency escape and rescue opening and a door. A room cannot be considered a bedroom if it is used to access another room unless the room that is accessed is a bathroom or a closet. For the purpose of determining system capacity, occupancy is calculated as a maximum of two persons per bedroom.

~~(11) Bedroom—A room designed primarily for sleeping or a room which is expected to routinely provide sleeping accommodations for occupants.~~

(12) No change

(13) Commercial Sewage Waste – Wastewater ~~Non-toxic, non-hazardous wastewater~~ from commercial facilities. ~~Examples of establishments I~~ included in this definition are commercial wastewaters and mixtures of commercial and domestic wastewaters from commercial and institutional food operations, commercial laundry facilities with no more than four washing 4 machines, ~~and~~ animal holding facilities (such as commercial kennels, veterinary hospitals, and animal grooming facilities), and beauty salons, provided toxic, hazardous or industrial wastes are not introduced into the system.

(14) to (59) No change

Rulemaking Authority ~~381.0011(4), (13),~~ 381.0065(3)(a) FS. Law Implemented 381.0065, 381.00655 FS. History—New 12-22-82, Amended 2-5-85, Formerly 10D-6.42, Amended 3-17-92, 1-3-95, Formerly 10D-6.042, Amended 11-19-97, 3-22-00, 11-26-06, _____. 64E-6.003 Permits.

(1) System Construction Permit – No portion of an onsite sewage treatment and disposal system shall be

installed, repaired, altered, modified, abandoned or replaced until a construction permit has been issued on Form DH 4016, 08/09, Construction Permit, herein incorporated by reference. If building construction has commenced, the system construction permit shall be valid for an additional 90 days beyond the eighteen month expiration date. ~~A fee shall not be charged for a repair permit issued within 12 months from the date of final authorization of the onsite sewage treatment and disposal system.~~ If a construction or repair permit for an onsite sewage treatment and disposal system is transferred to another person the date of the construction or repair permit shall not be amended, but shall run from the date of original issuance prior to the transfer. Servicing or replacing with like kind mechanical or electrical parts of an approved onsite sewage treatment and disposal system; pumping of septage from a system; or making minor structural corrections to a tank, or distribution box, does not constitute a repair.

(2) System Inspection - Before covering with earth and before placing a system into service, a person installing or constructing any portion of an onsite sewage treatment and disposal system shall notify the county health department of the completion of the construction activities and shall have the system inspected by the department for compliance with the requirements of this Chapter, except as noted in subsection 64E-6.003(3) for repair installations.

(a) through (b) No change

(c) Final installation approval shall not be granted until the DOH county health department has confirmed that all requirements of this Chapter, including building construction and lot grading are in compliance with plans and specifications submitted with the permit application.

1. In addition, if the system was required by this chapter to be designed by an engineer, ~~who shall be licensed in the State of Florida, the DOH county health department shall require the design~~ an engineer shall certify to the department ~~or the design engineer's designee, who shall be a licensed engineer, to certify~~ that the installed system complies with the approved design and installation requirements. ~~All Single family residences are excluded from this requirement, however, all~~ changes to the engineering specifications shall be approved by an the design engineer.

2. No change

(d) through (e) No change

(3) through (4) No change

(5) through (7) No change

Rulemaking Authority 381.0065(3)(a), 489.553(3), 489.557(1) FS. Law Implemented 381.0065, 381.0067,

386.041 FS. History–New 12-22-82, Amended 2-5-85, Formerly 10D-6.43, Amended 3-17-92, 1-3-95, 5-14-96, 2-13-97, Formerly 10D-6.043, Amended 3-22-00, 4-21-02, 5-24-04, 11-26-06, 6-25-09, 4-1-10, 4-28-10, _____.

64E-6.004 Application for System Construction Permit

(1) through (2) No change

(3) The suitability of a lot, property, subdivision or building for the use of an onsite sewage treatment and disposal system shall be determined from an evaluation of lot size, anticipated sewage flow into the proposed system, the anticipated sewage waste strength, soil and water table conditions, soil drainage and site topography and other related criteria. Necessary site investigations and tests shall be performed at the expense of the owner by either an engineer with soils training ~~who is licensed in the State of Florida pursuant to Chapter 471, F.S.;~~ by persons who have successfully completed a department-approved soils morphology course who are working under the direct responsible charge of an engineer licensed under Chapter 471, F.S.; ~~by department personnel;~~ registered septic tank contractors, master septic tank contractors, professional soil scientists certified and registered by the Florida Association of Environmental Soil Scientists; ~~;~~ or by department personnel or other ~~and~~ persons certified under s. 381.0101, F.S. Registered septic tank contractors shall perform site evaluations for system repairs only. When determining that the necessary site investigations and tests be performed by an engineer ~~licensed in the State of Florida,~~ the county health department must consider the criteria listed in subsection 64E-6.004(4). Results of site investigations shall be entered on Form DH 4015, Page 3 of 4, ~~or attached to, the construction permit application form~~ for consideration by the county health department. The application shall also include the following data:

(a) A plan or plat of the lot or total site ownership. The site plan shall be drawn to scale and shall be for the property where the system is to be installed. All site plans shall use standard civil engineering, non-metric scales. Site plans drawn with a scale of 10 – 30 feet to one inch shall have a margin of error of not more than one-half foot. Smaller scale site plans shall have a margin of error of not more than two feet between the scaled distance and the dimension shown or required. Site plans shall be drawn on Form DOH 4015 or submitted on 8.5x11 inch or up to 24x36 inch paper.

1. through 3. No change

4. If an individual lot is larger than one acre ~~five acres or greater,~~ the applicant may draw a detail area of at least an acre ~~minimum one-acre parcel~~ to scale showing all required features. If the required features are within 75 feet of the detail area, the distance to the feature must be shown but need not be drawn to scale. The location of any public

be shown with the distance from the system to the well, ~~or the minimum size drawing necessary to properly exhibit all required features, whichever is larger.~~ The detail area must be large enough to accommodate a daily sewage flow allowance equal to the estimated sewage flow to all systems within the detail area. The applicant must also show the location of that one acre or larger ~~detail area parcel~~ inside the total site ownership.

5. No change

(b) through (f) No change

(4) All plans and forms submitted by ~~an a-licensed~~ engineer shall be dated, signed and sealed. If the system was required by this chapter to be designed by an engineer, an ~~Except as provided for in subsection 64E-6.003(2), F.A.C., the DOH county health department shall require the design~~ engineer shall ~~to~~ certify that the installed system complies with the approved design and installation requirements. ~~The Under the following circumstances, the DOH county health department shall require for review and approval, the~~ submission of detailed system construction plans prepared by an engineer ~~who is licensed in the State of Florida~~ is required under the following circumstances:

(a) through (j) No change

(5) through (6) No change

(7) Where a property owner proposes to build or has built multiple residences or multiple businesses on a single lot, and splitting the property to separate any of the businesses or residences will place the onsite sewage treatment and disposal system in violation of this chapter, ~~and the entire area of the lot is required to accommodate the designed sewage flow from the multiple residences or multiple businesses to the onsite sewage treatment and disposal system,~~ the property owner must submit, prior to issuance of a construction permit, a written utility easement which has been executed and recorded in the public property records at the county courthouse. The utility easement must bind the property together so that the original lot size is retained for purposes of compliance with all the requirements of Rule 64E-6, and must include provisions for maintaining the onsite sewage treatment and disposal system. ~~For example, a duplex built on a single lot with a single onsite sewage treatment and disposal system serving both halves of the duplex must have a written utility easement executed and recorded in the public property records before an onsite sewage treatment and disposal system construction permit is issued. In order to obtain a repair permit, the property owner must submit a copy of the recorded utility easement demonstrating the retention of the original lot size for purposes of the onsite sewage treatment and disposal system and a method for~~

~~built on a single lot with a single onsite sewage treatment and disposal system serving both halves of the duplex is sold to separate persons. If, when the onsite sewage treatment disposal system fails, and a written utility easement was not executed and recorded in the public property records before the sales, it must be done before an onsite sewage treatment and disposal system repair permit is issued.~~

(a) Where a property owner proposes to build or has built a single residence or a single business or multiple residences or businesses on multiple lots, ~~and the residence's or business's authorized sewage flow requires the use of multiple lots, or parts thereof, for the onsite sewage treatment and disposal system,~~ the property owner must submit, prior to issuance of a permit, a written utility easement executed and recorded in the public property records at the county courthouse. The utility easement must bind the required property together so that the original lots and their collective size, or part thereof, is retained for purposes of the onsite sewage treatment and disposal system, and must include provisions for maintaining the onsite sewage treatment and disposal system. ~~For example, a residence or business built on three lots with a sewage flow which is large enough to require the land from all three lots must have a written utility easement executed and recorded in the public property records before an onsite sewage treatment and disposal system construction permit may be issued. In order to obtain a repair permit, the property owner must submit a copy of the recorded utility easement demonstrating the retention of the original lots and their collective size for purposes of the onsite sewage treatment and disposal system and a method for maintaining the system.~~

(b) No change

(8) No change

Rulemaking Authority 381.0065(3)(a), 489.553(3) FS. Law Implemented 381.0065, 489.553 FS. History—New 12-22-82, Amended 2-5-85, Formerly 10D-6.44, Amended 3-17-92, 1-3-95, 5-14-96, 2-13-97, Formerly 10D-6.044, Amended 11-19-97, 3-22-00, 11-26-06, 6-25-09, 4-28-10, [_____](#).

64E-6.005 Location and Installation.

Un-numbered introductory paragraph - No change

(1) Systems and septage stabilization facilities established after the effective date of the rule shall be placed no closer than the minimum distances indicated for the following:

(a) through (e) No change

(f) Fifteen feet from the design high-water line of retention areas, detention areas, or swales designed to contain standing or flowing water for less than 72 hours after a rainfall or the design high-water level of normally dry drainage ditches or normally dry individual-lot stormwater retention areas. [Excluded from this setback requirement are swales designed only to divert the runoff from drainfield mounds or filled systems.](#)

(2) Systems shall not be located under buildings or within 5 feet of building foundations, including pilings for elevated structures, or within 5 feet of mobile home walls, swimming pool walls, or within 5 feet of property lines except where property lines abut utility easements which do not contain underground utilities, or where recorded easements are specifically provided for the installation of systems for service to more than one lot or property owner.

(a) No change

(b) Systems shall not be located within 10 feet of water storage tanks in contact with the ground or potable water lines unless such lines are sealed with a water proof sealant within a sleeve of similar material pipe to a distance of at least 10 feet from the nearest portion of the system or the water lines themselves consist of schedule 40 PCV or stronger. In no case shall the water line be located within 24 inches of the onsite sewage treatment and disposal system. Potable water lines within 5 feet of the drainfield shall not be located at an elevation lower than the drainfield absorption surface. Non-potable water lines shall not be located within 24 inches of the system without backflow devices per Sections 381.0065(2)(1)1. and 2., F.S., being installed on the water line to preclude contamination of the water system. [Systems shall not be constructed within 10 feet of DEP-regulated water mains as defined in rule 62-555.314, F.A.C.](#)

(c) No change

(3) through (9) No change

Rulemaking Authority 381.0065(3)(a), 489.553, 489.557(1) FS. Law Implemented 381.0065, 489.553 FS. History—New 12-22-82, Amended 2-5-85, Formerly 10D-6.46, Amended 3-17-92, 1-3-95, Formerly 10D-6.046, Amended 11-19-97, 2-3-98, 3-22-00, 5-24-04, 6-25-09, ____.

64E-6.008 System Size Determinations

(1) Minimum design flows for systems serving any structure, building or group of buildings shall be based on the estimated daily sewage flow as determined from Table I or the following:

(a) through (b) No change

TABLE I
For System Design
ESTIMATED SEWAGE FLOWS

TYPE OF ESTABLISHMENT	GALLONS PER DAY
COMMERCIAL:	
Airports through Hotels No change	
Mobile Home Park or Recreational Vehicle Park	
(a) per single-wide mobile home space or non-transient recreational vehicle space or park model space, less than 4 single-wide spaces connected to a shared or individual onsite system	250
(b) per single-wide mobile home space or non-transient recreational vehicle space or park model space, 4 or more single-wide spaces connected to a shared onsite system.....	225
(c) per mobile home space for a mobile home wider than single-wide, add per mobile home width increment	50
(c) per double wide mobile home space, less than 4 double wide mobile home spaces connected to a shared onsite system	300
(d) per double wide mobile home space, 4 or more double wide mobile home spaces connected to a shared onsite system	275
(d) per transient recreational vehicle space for overnight stay, without water and sewer hookup per vehicle space.....	50

(e) per transient recreational vehicle space for

overnight stay, with water and sewer

hookup per vehicle space.....75

Office building

per employee per 8 hour shift or..... 15

per 100 square feet of floor space, whichever is greater..... 15

~~Transient Recreational Vehicle Park~~

~~(a) Recreational vehicle space for~~

~~overnight stay, without water~~

~~and sewer hookup per vehicle space.....50~~

~~(b) Recreational vehicle space for~~

~~overnight stay, with water and sewer~~

~~hookup per vehicle space.....75~~

Service Station through Work/Construction Camps No change

RESIDENTIAL:

Residences

(a) Single or multiple family per dwelling unit

1 Bedroom with 750 sq. ft. or less of building area..... 100

2 Bedrooms with 751-1200 sq. ft. of building area 200

3 Bedrooms with 1201-2250 sq. ft. of building area 300

4 Bedrooms with 2251-3300 sq. ft. of building area 400

For each additional bedroom or each additional 750 square feet of building area or fraction

thereof in a dwelling unit, system sizing shall be increased by 60 ~~100~~ gallons per dwelling unit.

(b) Other per occupant..... 50

Footnotes to Table I:

1. through 6. No change

(2) through (4) No change

(5) The minimum absorption area for standard subsurface drainfield systems, graywater drainfield systems, and

filled systems shall be based on estimated sewage flows and Table III so long as estimated sewage flows are 200 gallons per day or higher. When estimated sewage flows are less than 200 gallons per day, system size shall be based on a minimum of 200 gallons per day.

Table III No change

Footnotes to Table III:

1. through 4. No change

5. Where more than one soil texture classification is encountered within a soil profile and it is not removed as part of a replacement, drainfield sizing for standard subsurface drainfield systems and fill drainfield systems shall be based on the most restrictive soil texture in contact with the sidewalls or ~~encountered~~ within 24 inches of the bottom of the drainfield absorption surface.

(6) No change

Rulemaking Authority 381.0065(3)(a), FS. Law Implemented 381.0065, FS. History—New 12-22-82, Amended 2-5-85, Formerly 10D-6.48, Amended 3-17-92, 1-3-95, Formerly 10D-6.048, Amended 11-19-97, Amended 3-22-00, 9-5-00, 11-26-06, 6-25-09, _____.

64E-6.009 Alternative Systems

Un-numbered introductory paragraph – No change

(1) Waterless, incinerating or organic waste composting toilets - may be approved for use if found in compliance with standards for Wastewater Recycle/Reuse and Water Conservation Systems as defined by ANSI/NSF International Standard Number 41, revised March 28, 2005, or NSF protocol P157 Electrical Incinerating Toilets - Health and Sanitization, issued April 28, 2000, ~~May 1983~~, hereby incorporated by reference, and provided that graywater and any other liquid and solid waste is properly collected and disposed of in accordance with standards established in this Chapter. For residences, the required drainfield absorption surface and unobstructed area of the system treating the remaining sewage flow shall be reduced by 25% when waterless, incinerating or organic waste composting toilets are used exclusively for all toilet wastes. Solids removed from waterless, incinerating or organic waste composting toilets shall be mixed with lime, containerized, and disposed of with the solid waste from the establishment. Liquids discharging from waterless, incinerating or organic waste composting toilets shall be plumbed into the onsite system serving the establishment.

(2) Sanitary pit privy – shall not be permitted, built or used in Florida ~~except at remote locations where~~

~~r permanent residences.~~

(3) Mound systems – are used to overcome certain limiting site conditions such as an elevated seasonal high water table, shallow permeable soil overlying slowly permeable soil and shallow permeable soil located over creviced or porous bedrock. Special installation instructions or design techniques to suit a particular site shall, using the criteria in subsection 64E-6.004(4), F.A.C., be specified on the construction permit in addition to the following general requirements.

(a) through (c) No change

(d) Where the soil material underlying a mound system is of a similar textural material as that used in system construction, the mound drainfield size shall be based on estimated sewage flows as specified in Rule 64E-6.008, F.A.C., Table I and upon the quality of fill material utilized in the mound system. When estimated sewage flows are calculated to be less than 200 gallons per day, specifications for system design shall be based on a minimum flow of 200 gallons per day. Maximum sewage loading rates for soils used in mound construction shall be in compliance with the following:

Fill Material	Maximum Sewage Loading Rate to Mound Drain Trench Bottom Surface in gallons Per square foot per day	Maximum Sewage Loading Rate to Mound Absorption Bed Bottom Surface in gallons per square foot per day
Sand; Coarse Sand; and Loamy	0.80	0.60
Coarse Sand; <u>and Fine Sand</u>		
Fine Sand	0.80	0.60
Sandy Loam; Coarse Sandy Loam; and Loamy Sand	0.65	0.40
Fine Sandy Loam; Very Fine Sand; Loamy Fine Sand; and Loamy Very Fine Sand	0.35	0.25

(e) ~~Where moderately limited soils underlie the mound within 36 inches of the bottom of the drainfield,~~ Drainfield sizing shall be based on the most restrictive soil texture existing in contact with the drainfield sidewalls or in the profile to a depth of 36 inches below the bottom of the drainfield. Drainfield sizing based on soils below

~~using Table III for soil loading rates.~~ Drainfield sizing based on fill material above natural grade shall be based on the soil loading rates in subparagraph (d).

(f) through (j) No change

(4) No change

(5) Drip irrigation systems – Drip irrigation systems may, at the option of the applicant, be used in lieu of a mineral aggregate drainfield. Drip irrigation systems shall meet all requirements of this chapter except as noted below.

(a) Drip irrigation systems shall receive effluent from an approved aerobic treatment unit or a performance based treatment system designed to meet at least secondary treatment standards for CBOD₅ and TSS, and shall meet the following requirements:

1. through 26. No change

27. The minimum effective soil depth below drip emitter lines shall be 42 inches; however, spodic layers greater than 24 inches below the drip emitter lines may remain in place at the discretion of the engineer.

(b) No change

(6) through (10) No change

Rulemaking Authority 381.0065(3)(a) FS. Law Implemented 381.0065 FS. History—New 12-22-82, Amended 2-5-85, Formerly 10D-6.49, Amended 3-17-92, 1-3-95, Formerly 10D-6.049, Amended 11-19-97, 2-3-98, 3-22-00, 4-21-02, 6-18-03, 11-26-06, 6-25-09, _____.

64E-6.010 Septage and Food Establishment Sludge

(1) No change

(2) Application for a service permit shall be made to the DOH county health department on Form DH 4012, 01/92, “Application for Septage Disposal Service Permit, Temporary System Service Permit, Septage Treatment and Disposal Facility, Septic Tank Manufacturing Approval” herein incorporated by reference. The following must be provided for the evaluation prior to issuance of a service permit:

(a) Evidence that the applicant possesses adequate equipment such as a tank truck with a liquid capacity of at least 1500 gallons, pumps, off truck stabilization tanks and pH testing equipment where lime stabilization and land application are proposed, as well as other appurtenances and tools necessary to perform the work intended.

Equipment may be placed into service only after it has been inspected and approved by the DOH county health

department. Tanks used for the stabilization and storage of septage and food service sludges shall be constructed, sized, and operated in accordance with the following provisions:

1. Stabilization tanks and septage storage tanks shall be constructed of concrete, fiberglass, corrosion-resistant steel, or other equally durable material. Tanks shall be watertight and shall be water tested for leaks prior to placing into service. The [stabilization](#) tank shall have a liquid capacity of at least 3000 gallons.

2. through 3. No change

(b) through (c) No change

(3) through (6) No change

(7) The food establishment sludge and contents from onsite waste disposal systems shall be disposed of at a site approved by the DOH county health department and by an approved disposal method. Untreated domestic septage or food establishment sludges shall not be applied to the land. Criteria for approved stabilization methods and the subsequent land application of domestic septage or other domestic onsite wastewater sludges shall be in accordance with the following criteria for land application and disposal of domestic septage.

(a) through (d) No change

(e) All septage and food establishment sludge haulers regulated by Chapter 64E-6, F.A.C. are to maintain a collection and hauling log at the treatment site or at the main business location which provides the information listed below. [A copy of the log shall be submitted to the DOH county health department quarterly.](#) Records shall be retained for five (5) years.

1. through 8. No change

(f) through (v) No change

(8) through (10) No change

Rulemaking Authority: 381.0065(3)(a), 489.553(3), FS. Law Implemented: 381.0065, 386.041, 373.4595 FS. History: New 12-22-82, Amended 2-5-85, Formerly 10D-6.52, Amended 3-17-92, 1-3-95, 5-14-96, Formerly 10D-6.052, Amended 3-22-00, 05-24-04, 11-26-06, 6-25-09, 4-28-10, [_____](#).

64E-6.0101 Portable Restrooms and Portable or Stationary Holding Tanks.

(1) through (6) No change

(7) Portable Restrooms, Portable Holding Tanks, Stationary Holding Tanks, Mobile Restroom Trailers, Mobile Shower Trailers, and Portable Sinks

(a) through (g) No change

(h) Portable restrooms shall be serviced at least weekly and the inside of the structure housing the storage compartment shall be cleaned on each service visit. Each portable restroom service visit shall include the pumping and removal of the waste contents in the waste storage compartment. The waste storage compartment shall be charged with a sanitizer-deodorizer solution prepared in accordance with the sanitizer-deodorizer manufacturer's instructions to prohibit the growth of bacteria. The service visit shall include the use of an antiseptic cleaner on the interior compartment of the portable restroom including the interior walls, the toilet seat and surrounding seat top area, the urinal, and the floor. The service visit shall include the replacement of toilet tissue. The exterior of the portable restroom shall be cleaned periodically.

(i) through (x) No change

(y) Whenever temporary housing is provided to people who are homeless as a result of displacement from their homes either by immigration, natural disaster, or financial hardship, a minimum of one toilet, one hand washing sink, and one shower for each 20 people or fraction thereof shall be provided at the housing facility.

(8) No change

Rulemaking Authority: 381.0065(3)(a), 489.553(3), FS. Law Implemented: 381.0065, 386.041, FS. History: New 05-24-04, Amended 11-26-06, 6-25-09, 4-28-10, ____.

64E-6.013 Construction Materials and Standards for Treatment Receptacles.

(1) Onsite wastewater treatment receptacle design. The following requirements shall apply to all onsite wastewater treatment receptacles manufactured for use in Florida unless specifically exempted by other provisions of these rules:

(a) through (b) No change

(c) Design and testing of fiberglass, and polyethylene treatment receptacles:

1. through 3. No change

4. Each manufacturer of fiberglass or polyethylene receptacles approved prior to November 26, 2006, shall apply for re-approval of each receptacle not later than October 1, 2012. Re-approval requests shall be submitted to the department in accordance with the requirements for receptacle design approval in 64E-6.013(3). Receptacles shall be proof tested to show compliance with current standards. If the data from previous proof testing shows

[approved shall not be installed after December 1, 2012.](#)

(d) through (f) No change

(2) through (12) No change

Rulemaking Authority 381.0065(3)(a) FS. Law Implemented 381.0065 FS. History—New 12-22-82, Amended 2-5-85, Formerly 10D-6.55, Amended 3-17-92, 1-3-95, Formerly 10D-6.055, Amended 11-19-97, 2-3-98, 3-22-00, 4-21-02, 5-24-04, 11-26-06, 6-25-09, 4-28-10, [_____](#).

64E-6.014 Construction Standards for Drainfield Systems

(1) through (2) No change

(3) Low-Pressure dosing - where the total required area of drainfield is greater than 1000 square feet or where the applicant proposes to use low-pressure dosing, an automatic dosing device discharging into a low pressure distribution network consisting of 2 inch or smaller diameter schedule 40 PVC or equal pipe with ½ inch or smaller diameter drilled holes shall be used All piping shall use solvent welded connections or equal throughout to prevent dislocation of connections under pressure. The network shall be designed for equal distribution of effluent. For the purposes of this section, equal distribution shall mean that the flow from the least effective hole in the network shall deliver no less than 75% of the flow from the most effective hole. The selected pump capacity (as measured in Gallons Per Minute) versus total dynamic head shall be indicated on a pump curve and shall be shown by calculation to achieve an effluent velocity through the network of at least 2 ft per second to the first exit hole on each lateral. Each line of the pressure network shall individually connect to a pressure manifold and be sealed on their distal ends and shall not be looped with other lines regardless of whether the drainfield is a bed or a trench or whether it is in a mound, filled subsurface installation. Plans and equipment specifications for low-pressure dosing systems shall be approved by the department prior to construction or installation.

[\(a\) Where the total drainfield area is greater than 1000 square feet but not more than 2000 square feet, the applicant may, in lieu of low-pressure dosing, choose to split the drainfield into two drainfields, equal in size, each having no more than 1000 square feet, with each drainfield being lift-dosed.](#)

(a) through (f) renumbered as (b) through (g) No change

(4) through (6) No change

Rulemaking Authority 381.0065(3)(a), FS. Law Implemented 381.0065, FS. History—New 12-22-82,

Amended 2-5-85, Formerly 10D-6.56, Amended 3-17-92, 1-3-95, Formerly 10D-6.056, Amended 2-3-98, 3-22-00, 05-24-04, 11-26-06, 06-25-09, .

64E-6.015 Permitting and Construction of Repairs.

Un-numbered introductory paragraph – No change

(1) Any property owner or lessee who has an onsite sewage treatment and disposal system which is improperly constructed or maintained, or which fails to function in a safe or sanitary manner shall request from the DOH county health department, either directly or through their agent, a permit to repair the system prior to initiating repair of the system. A permit shall be issued on Form DH 4016 only after the submission of an application accompanied by the necessary exhibits and fees. Form DH 4015 shall be used for this purpose, and can be obtained from the department. Applications shall contain the following information:

(a) A site plan showing property dimensions, the existing and proposed system configuration and location on the property, the building location, potable and non-potable water lines, ~~within the existing and proposed drainfield repair area,~~ the ~~general~~ slope of the property, property lines and easements, any obstructed areas, any private or public wells, or any surface water bodies and stormwater systems in proximity to the onsite sewage system which restricts replacement or relocation of the drainfield system. For this paragraph, “in proximity” shall mean closer to the proposed or existing system than the distance of the current required setback in Table V plus 25 feet. The existing drainfield type shall be described, for ~~For~~ example, mineral aggregate, non-mineral aggregate, chambers, or other.

(b) through (f) No change

(2) through (12) No change

Rulemaking Authority 381.0065(3)(a) FS. Law Implemented 381.0065, 386.041 FS. History–New 3-17-92, Amended 1-3-95, 2-13-97, Formerly 10D-6.0571, Amended 2-3-98, 3-22-00, 5-24-04, 11-26-06, 6-25-09, 4-28-10, .

64E-6.016 U.S. Department of Agriculture Soil Textural Classification System.

(1) No change

(2) Florida’s major soil texture classifications and some of the characteristics which can be utilized in the field for identification of these soil texture groups is accomplished primarily by rubbing moist samples of soil material between the fingers and observing how the material feels.

(a) Sand ([S](#)) – Sand feels extremely gritty and does not form a ribbon or ball when wet or moist. A sand is loose and single grained. The individual grains can readily be seen or felt.

(b) Loamy sand ([LS](#)) – Loamy sand feels extremely gritty and forms a weak ball that cannot be handled without breaking.

(c) Sandy loam ([SL](#)) – A sandy loam feels extremely gritty and slightly sticky. When moist, it forms a cast that will bear careful handling without breaking.

(d) Loam ([L](#)) – A loam feels somewhat gritty, yet fairly smooth and slightly plastic. When moist, it forms a cast that may be handled quite freely without breaking. Loam forms only short ribbons about 0.25 inch to 0.50 inches in length. This soil texture is not common in Florida soils.

(e) Silt loam ([SIL](#)) – Silt loam lacks grittiness and feels extremely floury when moist or dry. When dry it may appear cloddy but the lumps can be readily broken. When moist it will form casts that can be freely handled without breaking. It will not form a ribbon but will give a broken appearance. This soil texture is not common in Florida soils.

(f) Silt ([SI](#)) – Silt lacks grittiness and feels extremely floury when moist or dry. It will not ribbon and forms a weak ball that will tolerate careful handling without breaking. This soil texture is extremely rare in Florida soils.

(g) Sandy clay loam ([SCL](#)) – Sandy clay loam feels very gritty and sticky. When moist it forms a firm ball and may form a ribbon of one to two inches before it breaks.

(h) Clay loam ([CL](#)) – A clay loam feels very sticky with little or no grittiness. When moist it will form a ribbon that is about one to two inches long. The moist soil is plastic and will form a cast or ball that will bear much handling. When kneaded in the hand it does not crumble readily but tends to work into a heavy compact mass.

(i) Sandy clay ([SC](#)) – Sandy clay feels extremely sticky and very gritty. When moist and forms a firm ball and produces a ribbon that is over two inches in length before breaking.

(j) Silty clay ([SIC](#)) – Silty clay feels both plastic and extremely sticky when moist and lacks any gritty feeling. It forms a firm ball and readily ribbons to over two inches in length before it breaks. This soil texture is not common in Florida soils.

(k) Clay ([C](#)) – A clay feels extremely sticky and is neither gritty nor floury. When moist it forms a ribbon over two inches in length before breaking. It will form a hard ball or cast which will not break when handled.

(l) Organic soils – Muck, peat, and mucky peat are used in place of textural class names in organic soils. Muck

is well decomposed organic soil material; peat consists of raw undecomposed organic soil material; and mucky peat designates materials intermediate in decomposition between muck and peat.

(3) Definitions of the soil texture classes according to distribution of size classes of mineral particles less than 2 millimeters in diameter are as follows:

(a) Sands – 85 percent or more sand and the percentage of silt plus 1 1/2 times the percentage of clay is 15 or less.

1. Coarse sand ([COS](#)) – 25 percent or more very coarse and coarse sand and less than 50 percent any other single grade of sand.

2. Sand ([S](#)) – 25 percent or more very coarse, coarse and medium sand, but less than 25 percent very coarse and coarse sand, and less than 50 percent either fine sand or very fine sand.

3. Fine sand ([FS](#)) – 50 percent or more fine sand; or less than 25 percent very coarse, coarse, and medium sand and less than 50 percent very fine sand.

4. Very fine sand ([VFS](#)) – 50 percent or more very fine sand.

(b) Loamy sands – At the upper limit 85 to 90 percent sand and the percentage of silt plus 1 1/2 times the percentage of clay is 15 or more; at the lower limit 70 to 85 percent sand and the percentage of silt plus twice the percentage of clay is 30 or less.

1. Loamy coarse sand ([LCOS](#)) – 25 percent or more very coarse and coarse sand and less than 50 percent any other single grade of sand.

2. Loamy sand ([LS](#)) – 25 percent or more very coarse, coarse, and medium sand and less than 50 percent either fine sand or very fine sand.

3. Loamy fine sand ([LFS](#)) – 50 percent or more fine sand; or less than 50 percent very fine sand and less than 25 percent very coarse, coarse, and medium sand.

4. Loamy very fine sand ([LVFS](#)) – 50 percent or more very fine sand.

(c) Sandy loams – 20 percent or less clay and 52 percent or more sand and the percentage of silt plus twice the percentage of clay exceeds 30; or less than 7 percent clay, less than 50 percent silt, and between 43 and 52 percent sand.

1. Coarse sandy loam ([COSL](#)) – 25 percent or more very coarse and coarse sand and less than 50 percent any other single grade of sand.

2. Sandy loam ([SL](#)) – 30 percent or more very coarse, coarse, and medium sand, but less than 25 percent very coarse and coarse sand, and less than 30 percent either fine sand or very fine sand.

3. Fine sandy loam ([FSL](#)) – 30 percent or more fine sand and less than 30 percent very fine sand; or between 15 and 30 percent very coarse, coarse, and medium sand; or more than 40 percent fine and very fine sand, at least half of which is fine sand, and less than 15 percent very coarse, coarse, and medium sand.

4. Very fine sandy loam ([VFSL](#)) – 30 percent or more very fine sand; or more than 40 percent fine and very fine sand, at least half of which is very fine sand, and less than 15 percent very coarse, coarse, and medium sand.

(d) Loam ([L](#)) – 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand.

(e) Silt loam ([SIL](#)) – 50 percent or more silt and 12 to 27 percent clay; or 50 to 80 percent silt and less than 12 percent clay.

(f) Silt ([SI](#)) – 80 percent or more silt and less than 12 percent clay.

(g) Sandy clay loam ([SCL](#)) – 20 to 35 percent clay, less than 28 percent silt, and 45 percent or more sand.

(h) Clay loam ([CL](#)) – 27 to 40 percent clay and 20 to 45 percent sand.

(i) Silty clay loam ([SICL](#)) – 27 to 40 percent clay and less than 20 percent sand.

(j) Sandy clay ([SC](#)) – 35 percent or more clay and 45 percent or more sand.

(k) Silty clay ([SIC](#)) – 40 percent or more clay and 40 percent or more silt.

(l) Clay ([C](#)) – 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Rulemaking Authority ~~381.0011(4),(13)~~, 381.0065(3)(a) FS. Law Implemented 381.0065, [381.00655](#) FS. History– New 12-22-82, Amended 2-5-85, Formerly 10D-6.58, Amended 3-17-92, 1-3-95, _____.

PART II

64E-6.017 Definitions.

Definitions in Chapter 64E-6, Parts I and III, F.A.C., are also applicable to Chapter 64E-6, Part II, F.A.C.

[\(1\) Basic disinfection – treatment process designed to meet secondary treatment standards for fecal coliform providing an arithmetic annual mean not to exceed 200 fecal coliform colonies per 100 ml sample.](#)

(1) through (3) renumber as (2) through (4) No change

[\(5\) \(4\) Minimum level of waste treatment – a treatment which will provide a recovered water product that contains not more, on a permitted annual average basis, than the following concentrations from a sampling point located following the final design treatment step of the onsite sewage treatment and disposal system:](#)

- (a) Biochemical Oxygen Demand (CBOD₅) 10 mg/L ~~±~~
- (b) Suspended Solids 10 mg/L ~~±~~
- (c) Total Nitrogen, expressed as N 10 mg/L ~~±~~
- (d) Total Phosphorus, expressed as P 1 mg/L ~~±~~

(5) through (7) renumbered as (6) through (8) No change

Rulemaking Authority ~~381.0011(4), (13), 381.006,~~ 381.0065(3)(a), (4)~~(1)(4)~~ FS., ~~Ch. 99-395, LOF.~~ Law Implemented ~~154.01, 381.001(2), 381.0011(4), 381.006(7), 381.0061,~~ 381.0065, ~~381.00655, 386.041~~ FS., ~~Ch. 99-395, LOF.~~ History—New 7-15-86, Amended 3-17-92, 1-3-95, Formerly 10D-6.062, Amended 3-3-98, 3-22-00, _____. 64E-6.018 System Location, Design and Maintenance Criteria.

(1) Table III of Chapter 64E-6, Part I, F.A.C., and other subsections of Part I pertaining to soil texture, soil depth, and maximum sewage loading rates for specific soils shall not apply to areas subject to the provisions of this Part except for Table III, Footnote 2., as it relates to the falling head percolation test procedure. However, approved system design criteria, system location, operation, maintenance and monitoring requirements of [this section](#) ~~subsections 64E-6.018(1), (2), (3), and (4), F.A.C.,~~ shall apply. A minimum of one soil profile and one percolation test per application shall be required for site evaluations performed in the Florida Keys. However, a soil profile and percolation test is not required when ~~the system design engineer chooses the use of~~ an injection well [is used](#) for effluent disposal. [The following information shall be used to determine the wet season water table elevation:](#)

[\(a\) U.S. Department of Agriculture Natural Resources Conservation Service \(USDA-NRCS\) soils maps and soil interpretation records.](#)

[\(b\) Mean high water elevation based on the Department of Environmental Protection, Bureau of Survey and Mapping, Land Boundry Information System \(LABINS\) mean high water data or determined by a surveyor in accordance with Chapter 177, FS.](#)

[\(c\) For the purposes of sections 64E-6.017 through 64E-6.0182, FAC, the wet season water table shall not be lower than the elevation of mean high water nor lower than the bottom of the range of the high water table depth in the USDA-NRCS soils maps and soil interpretation records.](#)

[\(2\) Effluent loading rates for various onsite sewage treatment and disposal system components installed under this part shall not exceed the following:](#)

(a) Nutrient-reducing material-lined drainfield receiving effluent from a performance-based treatment system.	1.7 gallons per day per square foot
(b) Sand-lined drainfield receiving effluent from a performance-based treatment system	1.3 gallons per day per square foot
(c) Sand-lined drainfield receiving effluent from an aerobic treatment unit	1.1 gallons per day per square foot
(d) Sand-lined drainfield receiving effluent from a septic tank	0.9 gallons per day per square foot
(e) Mineral aggregate filter receiving effluent from an aerobic treatment unit	5.5 gallons per day per square foot
(f) Mineral aggregate filter receiving effluent from a performance-based treatment unit designed to meet a performance standard of 10 mg/L for CBOD5 and TSS before the effluent passes through the filter.	8 gallons per day per square foot

(3) All new, [modified and repaired](#) onsite sewage treatment and disposal systems shall be performance-based treatment systems designed by an engineer ~~licensed in the State of Florida,~~ [permitted in accordance with Part IV of this chapter](#) and shall meet the minimum level of waste treatment as defined in [section Rule 64E-6.017, F.A.C.](#) All receptacles subject to a positive buoyancy exposure shall be anchored or otherwise weighted to prevent flotation during flooding periods. The [engineer's design shall evaluate the](#) receptacles ~~shall be evaluated~~ for buoyancy while in their normal operating condition.

(4) ~~(4)~~ An onsite sewage treatment and disposal system which meets the location, construction, maintenance and operational requirements of [this section paragraphs 64E-6.018\(1\)\(a\) or \(b\), F.A.C., shall be approved, provided that if an aerobic treatment unit is a component of the system design, the certification, construction, operational and maintenance requirements of Rule 64E-6.012, F.A.C., shall also be met. \[The design engineer may specify an aerobic treatment unit with a minimum treatment capacity equal to the estimated sewage flow in Table I in lieu of using the values in Table IV when the aerobic treatment unit is part of a performance-based treatment system.\]\(#\)](#)

(a) When final effluent disposal is into a nutrient reducing material-lined drainfield system, the following general requirements shall apply:

[1. A minimum 12 inch thick layer of nutrient-reducing material shall be placed beneath the bottom of the](#)

contiguous to the drainfield sidewall adsorption surfaces and extend from the elevation of the top of the drainfield sidewall down to at least 12 inches below the the bottom of the drainfield in order to ensure that all effluent leaving the drainfield through the bottom or sidewalls must pass through at least 12 inches of nutrient-reducing material.

2. If the nutrient-reducing material is more coarse than the quartz sand required in subparagraph 64E-6.018(4)(b)1., the nutrient reducing material shall overlie a 12 inch thick layer of quartz sand meeting the particle size requirements for sand liners in subparagraph 64E-6.018(4)(b)1.

3. No part of the system shall be within 25 feet of the mean high water line of tidally influenced surface water bodies or within 25 feet of the mean annual flood line of permanent nontidal surface water bodies or salt marsh and Buttonwood Association habitat areas where the dominant vegetation species are those typical of salt marsh communities.

~~1. The county health department shall require the installer of a nutrient-reducing material lined drainfield system to provide certification from the installer's nutrient reducing material supplier that the material supplied for such type of installations meets the requirements of this subsection.~~

~~2. No part of the system shall be within 25 feet of the boundaries of surface water bodies or salt marsh and Buttonwood Association habitat areas where the dominant vegetation species are those typical of salt marsh communities.~~

~~4. 3. The bottom of the drainfield shall be at least 24 inches above the wet season water table. The bottom surface of the nutrient reducing material layer shall be at least 12 inches above the wet season water table. The bottom surface of the sand layer, if required, shall be at or above the elevation of the wet season water table. ~~mean high water.~~~~

~~4. Appropriate shallow root vegetative cover shall be established over drainfield systems to maximize the beneficial effects of evapotranspiration.~~

~~5. Nutrient-reducing material has a finite life span. The nutrient-reducing material shall be replaced as necessary to ensure that the system continues to meet the minimum level of waste treatment.~~

5. Even effluent distribution over the nutrient reducing material layer shall be assured by utilizing low-pressure dosing or drip irrigation.

6. If drip emitter lines are used, the nutrient-reducing material shall extend at least 12 inches horizontally from

(b) When final disposal is into a sand-lined drainfield, the following general requirements apply:

1. For a sand-lined drainfield, a minimum 12 inch thick layer of quartz sand shall be placed beneath the bottom of the drainfield adsorption surface and a minimum 12 inch wide and minimum 24 inch thick layer of quartz sand shall be placed contiguous to the drainfield sidewall adsorption surfaces in order to provide an additional level of effluent treatment prior to effluent passing into the surrounding natural limestone rock. Sand material shall have either an effective grain size in the range of 0.25 millimeter to 1.00 millimeter and shall have a uniformity coefficient of less than 3.5, or the material shall be of such size whereby at least 90 percent of the sand particles pass a U.S. Standard Number 18 sieve and less than 10 percent pass a number 60 sieve. These materials are in the USDA soil texture classes known as medium sand and coarse sand. The installer of a sand-lined drainfield system shall provide to the department certification from the sand supplier that the sand meets the requirements of this subsection.

2. The system shall meet the setback requirements of 64E-6.018(4)(a)3.

3. The bottom of the drainfield shall be at least 24 inches above the wet season water table.

(c)(b) An injection well shall be approved for final effluent disposal provided setbacks from salt marsh/buttonwood habitats and other surface water bodies cannot be met by another approved effluent disposal system described in this section ~~noted above~~, and provided the installation is in compliance with the following:

1. An injection well shall not be permitted or installed under the provisions of this part in any area designated by the United States Environmental Protection Agency or the Florida Department of Environmental Protection as having a single or sole source aquifer. Single source aquifer is defined in subsection 62-520.200(14), F.A.C.

2. In areas where injection wells are approved for use, the ~~DOH County Health Department~~ department shall be the permitting authority for the engineer designed onsite sewage treatment unit and the injection well, where the estimated daily domestic sewage flow will not exceed 2000 gallons per day. For establishments having a total daily domestic sewage flow greater than 2000 gallons per day but not greater than 10,000 gallons per day or establishments having a daily commercial sewage flow not greater than 5000 gallons per day, the ~~Monroe County Health Department~~ department shall be the permitting authority for the engineer designed treatment unit and DEP shall be ~~is~~ the permitting authority for the injection well and any additional associated effluent treatment device.

3. The ground surface within a distance of at least 10 feet in all directions around the injection well and any

portion of the onsite sewage treatment and disposal system shall not be subject to ~~frequent surface or ground water~~ flooding. In addition, the invert of the effluent inlet pipe to the injection well shall be a minimum 18 inches above the estimated ~~mean seasonal~~ high water level.

4. If there is adequate vertical and horizontal clearance to allow for proper maintenance, repair or replacement of the treatment unit and injection well, such components of the onsite sewage treatment and disposal system shall be allowed to be placed beneath an elevated building.

5. Prior to discharge into an injection well, effluent shall pass through an unsaturated mineral aggregate filter unit as described in this paragraph or through a filter unit that has been determined by the State Health Office to allow the discharge of no more than 5 mg/L of CBOD₅ and TSS from the filter and at a minimum shall provide a 50% reduction in CBOD₅ and TSS. The unsaturated mineral aggregate filter shall be designed in accordance with the following:

a. Effluent application to the unsaturated mineral aggregate filter unit shall be by gravity or pressure distribution to a perforated pipe distribution system as specified in Rule 64E-6.014, F.A.C. Such distribution system shall be placed within the walls of the mineral aggregate filter and shall be placed above a minimum 24-inch thick mineral aggregate filter layer. Mineral aggregate filter material shall have either an effective size in the range of 1.18 millimeters to 4.75 millimeters and a uniformity coefficient of less than 3.5 or the material shall meet aggregate size number eight or nine according to Florida Department of Transportation specifications under Section 901, "Standard Specifications for Road and Bridge Construction", 1991. The system designer may specify additional layers of filter material above or below the required 24-inch layer of filter material. The installer of mineral aggregate filter systems shall provide certification from the aggregate supplier that the aggregate meets requirements of this sub-paragraph. If the filter is not sealed with a lid meeting the requirements for septic tank lids in 64E-6.013, F.A.C., the top of the filter shall be at least 18 inches above the elevation of the wet season water table and the filter shall be capped with a layer of slightly limited soil no less than 6 nor more than 12 inches thick. The design engineer may choose to use 24 inches of phosphorous adsorbing material in lieu of the 24-inch layer of filter material provided the effective size of the phosphorous adsorbing material meets the particle size specifications of this sub-paragraph.

b. The maximum sewage loading rate to an approved filter unit other than an unsaturated mineral aggregate filter as described in this section shall be evaluated by the State Health Office based on unit design, size, filter media characteristics and expected functional life of the unit.

c. Effluent having passed through an unsaturated mineral aggregate filter shall collect in an underdrain for discharge into an injection well. The underdrain shall consist of minimum 4 inch diameter perforated drainpipe which is encased within a minimum 8 inch depth of 1/2 to 2 inch diameter washed and durable mineral aggregate. The walls and bottom of the filter unit shall be reinforced concrete or other material of adequate strength and durability to withstand hydrostatic and earth stresses to which the unit will be subjected. The walls and bottom of the unit shall be made watertight so that the total volume of effluent passed through the mineral aggregate filter will be collected in the filter underdrain for discharge into the injection well.

6. Prior to discharge into an injection well, effluent from the filter unit shall be disinfected by chlorination or other disinfection method approved by the State Health Office to meet the basic disinfection requirements of this rule. Where chlorination is used, a free chlorine residual of 0.5 milligram per liter measured at the point of effluent discharge after a minimum chlorine contact time of 15 minutes prior to discharge into the injection well, shall be maintained in the effluent at all times. Disinfection shall occur in a treatment chamber dedicated to that purpose. Contact time shall be based on a peak hourly flow of no less than 20% of the estimated daily sewage flow.

~~5. Prior to discharge into an injection well, effluent shall be disinfected by chlorination or other disinfection method approved by the State Health Office. A minimum disinfection level equivalent to a free chlorine residual of 0.5 milligrams per liter measured at the point of effluent discharge after a minimum chlorine contact time of 15 minutes into the injection well, shall be maintained in the effluent at all times.~~

7. ~~6.~~ An injection well to receive an estimated daily domestic sewage flow not exceeding 2000 gallons per day shall meet minimum construction criteria a., b. and c. of this sub-paragraph. The ~~Monroe County Health Department shall be notified by the~~ well driller shall notify the county health department regarding the time when the well will be drilled so the ~~county health~~ department can schedule observation of well construction. The ~~DOH County Health Department shall not approve an~~ injection well shall not be approved for use until the well driller has certified, in writing to the ~~department DOH County Health Department,~~ that the well has been installed in compliance with the provisions of this sub-paragraph. The inspection fee for the construction of an injection well shall be \$125.00.

a. An injection well as defined in subsection 64E-6.017(4) ~~(3)~~, F.A.C., shall be constructed, in part, utilizing a casing of polyvinyl chloride, commonly referred to as PVC. The minimum PVC casing weight and strength classification shall be schedule 40 and the minimum outside diameter of the casing shall be 4 inches. Other casing materials having strength and corrosion resistance properties equal to or greater than PVC schedule 40 pipe shall

also be approved.

b. An open hole having a minimum diameter of 6 inches shall extend to a depth of not less than 30 feet below the bottom of the casing.

c. The annular space between the casing and the natural rock wall of the borehole shall be grouted the full length of the casing.

~~8. 7.~~ A minimum of one maintenance visit every four months shall be made to those systems using injection wells for effluent disposal. The visit shall include an inspection of any filter units and the chlorination unit and include information on chlorine residuals to assess compliance with the disinfection requirements of this rule ~~any filter units~~. When an aerobic treatment unit is a component of the onsite sewage treatment and disposal system, documents and reports required in Rule 64E-6.012, F.A.C., shall also include the results of aerobic treatment unit inspections ~~and shall include information on chlorine residuals to assess compliance with the disinfection requirements of this rule.~~

~~9. 8.~~ Within 90 days following the discontinuation of the use of ~~If~~ an injection well ~~is discontinued~~ for effluent disposal the, the well owner shall obtain an abandonment permit, Form DH 4016, from the department. The injection well shall be properly abandoned and plugged by filling the injection well from bottom to top with cement grout: or by filling the open hole from the bottom of the hole to one foot below the bottom of the casing with gravel that meets the size requirements for drainfield aggregate in paragraph 64E-6.014(5)(c), and filling the remainder of the injection well with cement grout. The Monroe County Health Department shall be notified by the well driller, septic tank contractor, or state-licensed plumber at least two work days prior to the time when the well will be abandoned so the department can schedule observation of the entire well abandonment procedure. The department shall not approve an injection well abandonment until the well driller, septic tank contractor, or state-licensed plumber has certified in writing that the well has been abandoned in compliance with the provisions of this subparagraph. If the abandonment of the well is not ready to be inspected at the time of the inspection of the abandonment of the treatment receptacles, the inspection fee for the abandonment of an injection well shall be \$75.00 and shall be paid to the department prior to the inspection.

~~(2) For an aerobic treatment unit treating domestic sewage flows in excess of 1500 gallons per day but not exceeding 10,000 gallons per day, where effluent from the treatment unit will be discharged to an engineer designed soil absorption drainfield system, the following requirements shall be met:~~

~~(a) The soil absorption drainfield system shall be set back from surface water bodies by the greatest distance attainable, but shall meet at least minimum setback and elevation requirements specified in subsection 64E-6.018(1), F.A.C.~~

~~(b) The owner or lessee of a system shall comply with the general maintenance and operational requirements of subsections 64E-6.012(2) and (3), F.A.C., and any additional operation and maintenance requirements specified by the system design engineer.~~

(d) Nutrient-reducing materials have a finite life-span. Nutrient-reducing material shall be used in accordance with the following requirements:

1. The installer shall provide documentation from the nutrient reducing material supplier or from an independent testing organization that the material supplied meets the requirements of this section. The documentation shall include the capacity of the material to adsorb nutrient stated in units of mass of nutrient adsorbed per mass of adsorbing material.

2. Where the nutrient-adsorbing material will be used to underlie a drainfield in accordance with paragraph 64E-6.018(4)(a), the documentation from the nutrient-adsorbing material supplier or independent testing organization shall include either the effective grain size in millimeters and the uniformity coefficient of the material or a sieve analysis of the material showing the percentage passing a U.S. Standard Number 18 sieve and the percentage passing a number 60 sieve.

3. Where the design engineer has chosen to use 24 inches of phosphorous adsorbing material in lieu of the 24-inch layer of filter material as allowed in 64E-6.018(4)(c)5.a., the documentation from the nutrient-adsorbing material supplier or independent testing organization shall include either the effective size in millimeters and the uniformity coefficient of the material or the Florida Department of Transportation aggregate classification number for the material.

4. The nutrient reducing material shall be replaced as necessary to ensure that the system continues to meet the minimum level of waste treatment. The design engineer shall specify the capacity of the nutrient reducing material to adsorb nutrient stated in units of mass of nutrient adsorbed per mass of adsorbing material at the design effluent nutrient concentration. The design engineer shall provide an estimate of the life span for the system using the adsorption capacity and estimated sewage flow. The minimum calculated life span shall be two years.

(5) ~~(3)~~ The owner or lessee of a performance-based treatment system shall obtain and maintain a maintenance

contract with an approved maintenance entity.

(a) All new onsite sewage treatment and disposal systems shall be inspected by an approved maintenance entity at least two times each year.

(b) The maintenance entity shall furnish to the county health department a listing of all performance based treatment systems inspected or serviced during the respective reporting period. As a minimum, reports shall indicate the system owner or building lessee, the street address of the system, the date of system inspection or service and a statement as to the maintenance or service performed. The maintenance entity shall also include a list of the owners who have refused to renew their maintenance contract. ~~A maintenance report shall be kept by the maintenance entity. A copy of all maintenance reports shall be provided to the county health department. The report shall include the following information:~~

~~1. The address of the system.~~

~~2. Date and time of inspection.~~

~~3. Sample collection time and date, and person who collected sample.~~

~~4. Results of all sampling.~~

~~5. Volume of effluent treated, to include total monthly and daily average.~~

~~6. Maintenance performed.~~

~~7. Problems noted with the treatment system and actions taken or proposed to overcome them.~~

(6) The maintenance entity of a performance-based treatment system shall cause the system to be tested for nitrogen and phosphorous at least once every year. If a screening test is used, the screening test shall be one of the tests approved by the Monroe County Health Department. If the county health department is requested to conduct the screening test, an inspection fee of \$75 shall be paid to the department prior to requesting the test. Upon the results of a screening test that shows a violation for phosphorous or nitrogen, the owner shall have the system sampled and tested by a laboratory certified by the department.

(a) If any individual laboratory-certified test shows a total phosphorous concentration in excess of 4.0 mg/L, the system may be re-sampled at the owner's discretion. If the system is not re-sampled within 30 days of the original sampling date or the resample shows a phosphorous concentration in excess of 4.0 or shows less than a 50% reduction of phosphorous between the influent and effluent samples, the phosphorous adsorbing material shall be replaced as a system repair or the system shall be re-engineered. The system shall be brought into compliance with

(b) If any individual laboratory certified test shows a total nitrogen concentration in excess of 40.0 mg/L, the system may be re-sampled at the owner's discretion. If the system is not re-sampled within 30 days of the original sampling date or the resample shows a nitrogen concentration in excess of 40.0 or shows less than a 50% reduction of nitrogen between the influent and effluent samples, the system shall be re-engineered. The system shall be brought into compliance with treatment standards required at the time of system permitting.

~~(7) (4)~~ In conjunction with the systems specified in this section ~~subsections 64E-6.018(1) and (2), F.A.C.~~, an applicant may use the alternative systems described in subsection 64E-6.009(1), (3), (4), (5) ~~or (6), or (7)~~, F.A.C. An alternative system shall meet the general intent of Part I and Part II of this rule.

Rulemaking Authority ~~381.0011(4), (13), 381.006, 381.0065(3)(a), (4)(l) FS., Ch. 99-395, L.O.F.~~ Law Implemented 381.0065, 381.00655 FS., ~~Ch. 99-395, L.O.F.~~ History—New 7-15-86, Amended 3-17-92, 1-3-95, Formerly 10D-6.063, Amended 3-3-98, 3-22-00, 4-21-02, 11-26-06, ____.

64E-6.0181 System Repair and Cesspit and Undocumented System Replacement ~~and Interim System Use~~

(1) Where a property is determined to have a cesspit or an undocumented system, the cesspit or undocumented system shall be required to be replaced with an onsite sewage treatment and disposal system complying with Rule 64E-6.018, F.A.C., ~~except as provided for in subsection (2).~~

(2) In areas that are scheduled to be served by a central sewer by December 31, 2015, where there is documentation from the sewer utility that the property is scheduled to be served by December 31, 2015 and there is documentation from the sewer utility or from the county tax collector's office that the property owner has paid or has signed an agreement to pay for connection to the central sewer system, an onsite sewage treatment and disposal system requiring repair shall be repaired to the standards in this section. ~~sewage facility before July 1, 2010, interim construction standards specified in subsection 64E-6.0181(3), F.A.C., for new, modified, expanded or existing onsite sewage treatment and disposal systems or to replace cesspits or undocumented systems shall be allowed.~~

~~(a) Interim system requirements shall be allowed through July 1, 2004, for onsite sewage treatment and disposal systems in areas that are scheduled to be served, according to an adopted local comprehensive plan determined to be in compliance by the Department of Community Affairs, by a central sewage facility before July 1, 2010.~~

~~(b) After July 1, 2004, interim system requirements shall be allowed in an area scheduled to be served by a central sewage facility only when all of the following conditions are met:~~

~~1. An enforceable contract to provide the central sewage and collection system has been signed;~~
~~2. The contract contains a binding schedule for connection of the onsite sewage treatment and disposal systems to the central sewage facility; and~~

~~3. There is an enforceable requirement for abandonment of the onsite sewage treatment and disposal systems.~~

~~(c) Onsite sewage treatment and disposal systems that are not scheduled to be served in accordance with this section shall provide the level of treatment required in Rule 64E-6.018, F.A.C.~~

~~(d) All onsite sewage treatment and disposal systems in operation on July 1, 2010, shall provide the level of treatment required in Rule 64E-6.018, F.A.C.~~

~~(3) Interim systems standards shall be:~~

(a) No system shall be repaired to meet a lower standard of treatment than the treatment standard permitted or required to be met prior to the repair.

(b) The following general requirements apply for the use of a septic tank and sand-lined drainfield system:

1. A tank need not be replaced as part of the repair if the department determines the tank to be free of observable defects, constructed of approved materials, and if such tank has an effective capacity within two tank sizes of the capacities required by Table II. In addition, the tank shall be pumped and a solids deflection device or outlet filter shall be installed as a part of the outlet of the tank if one is not currently in place. If the tank needs to be replaced as part of the repair, it shall be replaced with a tank meeting the requirements of Table II and 64E-6.013, FAC.

2. Effluent from the septic tank shall discharge to a drainfield over a sand liner meeting the standards in subparagraph 64E-6.018(4)(b)1.

3. No part of a septic tank and sand-lined drainfield system shall be located within 50 feet of the mean high water line of tidally influenced surface water bodies or within 50 feet of the mean annual flood line of permanent non-tidal surface water bodies.

4. The drainfield component of the system must be located a minimum distance of 50 feet from salt marsh and Buttonwood Association habitat areas where the dominant vegetation species are those typical of salt marsh communities.

5. The bottom of the drainfield shall be at least 30 inches above the wet season water table. At least 12 inches of the sand layer shall be at least 18 inches above the wet season water table.

(c) The following general requirements apply for the use of an aerobic treatment unit and a sand-lined drainfield system:

1. ~~The (a) A Class I aerobic treatment unit shall meet the which meets the location, construction, maintenance and operational requirements of subparagraph 64E-6.0181(3)(a)1. or 2., F.A.C., and the certification, construction, operational and maintenance requirements of Rule 64E-6.012, F.A.C.~~

~~1. Where a Class I aerobic treatment unit is utilized, and where final effluent disposal is into a sand lined drainfield system, the following general requirements shall apply:~~

2. Effluent from the aerobic treatment unit shall discharge to a drainfield over a sand liner meeting the standards in subparagraphs 64E-6.018(4)(b)1., 2. and 3.

~~a. For a sand lined drainfield, a minimum 12 inch thick layer of quartz sand shall be placed beneath the bottom of the drainfield absorption surface and a minimum 12 inch wide and minimum 24 inch thick layer of quartz sand shall be placed contiguous to the drainfield sidewall absorption surfaces in order to provide an additional level of effluent treatment prior to effluent passing into the surrounding natural limestone rock. Sand material shall have either an effective grain size in the range of 0.25 millimeter to 1.00 millimeter and shall have a uniformity coefficient of less than 3.5, or the material shall be of such size whereby at least 90 percent of the sand particles pass a U.S. Standard Number 18 sieve and less than 10 percent pass a number 60 sieve. These materials are in the USDA soil texture classes known as medium sand and coarse sand. The county health department shall require the installer of a sand lined drainfield system to provide certification from the installer's sand supplier that the sand supplied for such type of installation meets the requirements of this subsection.~~

~~b. No part of the system shall be within 25 feet of the mean high water line of tidal surface water bodies or within 25 feet of the ordinary high water line of lakes, ponds or other non tidal surface waters or salt marsh and Buttonwood Association habitat areas where the dominant vegetation species are those typical of salt marsh communities.~~

~~c. The bottom surface of the sand layer shall be at least 12 inches above mean high water.~~

~~d. The maximum sewage loading rate to an aerobic treatment unit absorption bed drainfield with underlying sand liner shall be 1.1 gallons per square foot per day.~~

~~e. Appropriate shallow root vegetative cover shall be established over drainfield systems to maximize the beneficial effects of evapotranspiration.~~

(d) The following general requirements apply for the use of an aerobic treatment unit and an injection well as defined in 64E-6.017, F.A.C.

1. The Class I aerobic treatment unit shall meet the certification, construction, operational and maintenance requirements of Rule 64E-6.012, F.A.C.

2. Effluent from the aerobic treatment unit shall discharge to a filter, disinfection chamber and injection well located, designed, installed, operated and maintained in accordance with paragraph 64E-6.018(4)(c).

~~2. Provided a Class I aerobic treatment unit is utilized and provided effluent from the treatment unit, prior to discharge into an injection well, is passed through a mineral aggregate filter unit as described in subparagraph 64E-6.0181(3)(a)2., F.A.C., or where effluent is passed through a filter unit of another design which has been determined by the State Health Office to be at least equal to the mineral aggregate filter unit with regard to sewage treatment capability, an injection well shall be approved in compliance with the following:~~

~~a. An injection well shall not be permitted or installed under the provisions of this part in any area designated by the United States Environmental Protection Agency or the Florida Department of Environmental Protection as having a single or sole source aquifer. Single source aquifer is defined in subsection 62-520.200(14), F.A.C.~~

~~b. In areas where injection wells are approved for use, the DOH Monroe County Health Department shall be the permitting agent for the aerobic treatment unit, the filter unit and the injection well, where the estimated daily domestic sewage flow will not exceed 2000 gallons per day. For establishments having a total daily sewage flow greater than 2000 gallons per day but not greater than 10,000 gallons per day, the Monroe County Health Department shall be the permitting authority for the aerobic treatment unit and the filter unit and DEP is the permitting agent for the injection well and any additional associated effluent treatment device. The effluent from the treatment unit permitted by the DOH Monroe County Health Department shall not exceed 20 mg/l CBOD₅ or 20 mg/l suspended solids on a permitted annual average basis and shall have disinfection in accordance with subparagraph 64E-6.0181(3)(a)2.h., F.A.C., prior to discharge into any injection well.~~

~~c. The interior of the aerobic treatment unit, the top surface of the mineral aggregate filter soil cover, and the ground surface within a distance of at least 10 feet in all directions around the injection well, filter unit and aerobic treatment unit shall not be subject to surface or ground water flooding. In addition, the invert of the effluent inlet pipe to the injection well shall be a minimum 18 inches above the estimated seasonal high water level.~~

~~d. If there is adequate vertical and horizontal clearance to allow for proper maintenance, repair or replacement~~

disposal system shall be allowed to be placed beneath an elevated building.

e. If a mineral aggregate filter as referred to in subparagraph 64E-6.0181(3)(a)2., F.A.C., is utilized, effluent discharge from the aerobic unit shall be by gravity or pressure distribution to a perforated pipe distribution system as specified in Part I, Rule 64E-6.014, F.A.C. Such distribution system shall be placed within the walls of the mineral aggregate filter and shall be placed above a mineral aggregate filter layer which shall be at least 24 inches thick. Mineral aggregate filter material shall have either an effective size in the range of 2.36 millimeters to 4.75 millimeters and shall have a uniformity coefficient of less than 3.5 or the material shall be equivalent in size to Florida Department of Transportation aggregate classification number eight or nine. The system designer may specify additional layers of filter material above or below the required 24 inch layer of filter material. The DOH Monroe County Health Department shall require the installer of mineral aggregate filter systems to provide certification from the installer's mineral aggregate supplier that the aggregate supplied meets requirements of this sub-paragraph. If the filter is not sealed with a lid meeting the requirements of paragraph 64E-6.013(1)(e), F.A.C., the filter shall be capped with a layer of slightly limited soil no less than 6 nor more than 12 inches thick.

f. The maximum sewage loading rate to the mineral aggregate filter shall be 5.5 gallons per square foot per day based upon the top surface area of the filter layer. The maximum sewage loading rate to an approved filter unit other than a mineral aggregate filter as described in this section shall be evaluated by the State Health Office based on unit design, size, filter media characteristics and expected functional life of the unit.

g. Effluent having passed through a mineral aggregate filter shall collect in an underdrain for gravity or mechanical discharge into an injection well. The underdrain shall consist of minimum 4 inch diameter perforated drainpipe which is encased within a minimum 8 inch depth of 1/2 to 2 inch diameter washed and durable aggregate. The walls and bottom of the filter unit shall be reinforced concrete or other material of adequate strength and durability to withstand hydrostatic and earth stresses to which the unit will be subjected. The walls and bottom of the unit shall be made waterproof so that the total volume of effluent passed through the mineral aggregate filter will be collected in the filter underdrain for discharge into the injection well.

h. Prior to discharge into an injection well, effluent from the filter unit shall be disinfected by chlorination or other disinfection method approved by the State Health Office. A minimum disinfection level equivalent to a free chlorine residual of 0.5 milligram per liter measured at the point of effluent discharge after a minimum chlorine

~~e effluent at all times.~~

~~i. An injection well to receive an estimated daily domestic sewage flow not exceeding 2000 gallons per day shall meet minimum construction criteria (I), (II) and (III) of this sub paragraph. The DOH Monroe County Health Department shall not approve an injection well for use until the well driller has certified, in writing to the DOH Monroe County Health Department, that the well has been installed in compliance with the provisions of this sub-paragraph. The inspection fee for the construction of an injection well shall be \$125.00.~~

~~(I) An injection well as defined in subsection 64E-6.017(3), F.A.C., shall be constructed, in part, utilizing a casing of polyvinyl chloride, commonly referred to as PVC. The minimum PVC casing weight and strength classification shall be schedule 40 and the minimum outside diameter of the casing shall be 4 inches. Other casing materials having strength and corrosion resistance properties equal to or greater than PVC schedule 40 pipe shall also be approved.~~

~~(II) An open hole having a minimum diameter of 6 inches shall extend to a depth of not less than 30 feet below the bottom of the casing.~~

~~(III) The annular space between the casing and the natural rock wall of the borehole shall be grouted the full length of the casing.~~

~~j. A minimum of one maintenance visit every four months shall be made to those systems using injection wells for effluent disposal. In addition to the standard aerobic treatment unit maintenance visit, the visit shall include an inspection of the chlorination and filter units. Documents and reports required in Rule 64E-6.012, F.A.C., shall also include the results of these inspections and shall include information on chlorine residuals to assess compliance with the disinfection requirements of this rule.~~

~~k. If an injection well is discontinued for effluent disposal use such injection well shall be properly abandoned and plugged by filling the injection well from bottom to top with cement grout.~~

~~(b) A performance based treatment system designed and certified by a professional engineer, licensed in the state, as producing an effluent meeting at a minimum the treatment standards for a system designed in accordance with paragraph 64E-6.0181(3)(a), F.A.C., and permitted, constructed and monitored in accordance with Part IV.~~

Rulemaking Authority ~~381.0011(4), (13), 381.0065(3)(a),~~ [\(4\)\(1\)](#) FS., ~~Ch. 99-395, LOF.~~ Law Implemented 381.0065, 381.00655 FS., ~~Chs. 99-395, 2001-337, LOF.~~ History—New 3-3-98, Amended 3-22-00, 4-21-02, 5-24-04, 11-26-06,

64E-6.025 Definitions

Due to extensive revision, strike entire section and add the following:

Definitions in Chapter 64E-6, Parts I and II, are also applicable to Chapter 64E-6, Part IV.

(1) Bottom infiltrative surface - the vertical projection of the bottom surface of the drainfield that is no lower in elevation than 30 inches below grade.

(2) Composite sample – a defined mixture of grab samples of wastewater or effluent taken in proportion to either time or flow, to minimize the effect of the variability of the individual sample.

(3) Disposal component – arrangement of equipment and/or materials that distributes effluent within a drainfield

(4) Effluent – treated sewage at the point of discharge to the drainfield or disposal system. Where the site specific application proposes to use soil as component of the treatment system, effluent refers to the mixture of soil water, effluent and shallow groundwater recovered from the monitoring points and treatment concentration standards shall be decreased by 50% for cBOD₅, TSS, TN, and TP, and by 90% for fecal coliform, and percent removal standards of table IX shall be correspondingly adjusted. For systems designed to meet the standards of 64E-6.017(4), effluent refers to the recovered water product from a sampling point following the final design treatment step.

(5) Failure - in addition to 64E-6.002(23), exceedance by an individual sample of the applicable performance standards, unless the maintenance entity performs and documents maintenance, and a second individual sample is taken within 30 days of the first individual sample and meets the applicable individual performance standard.

(6) Grab sample - a sample which is taken from wastewater or effluent over a period of time not to exceed fifteen minutes.

(7) Effective drainfield depth - the vertical distance from the bottom of the drainfield to the invert of the distribution pipe. For drainfields containing no distribution pipe, the effective drainfield depth shall be the vertical distance from the bottom of the drainfield to the invert of the header or other pipe delivering effluent to the drainfield.

(8) Innovative System – as defined by s. 381.0065(2)(g), F.S.

(9) Performance-based treatment system - an onsite sewage treatment and disposal system designed by an engineer to achieve specified levels of CBOD₅ (carbonaceous biochemical oxygen demand), TSS (total suspended

and measurable established performance standard. This term also includes innovative systems.

(10) Performance-based treatment system maintenance entity - any person or business entity which has obtained an annual written permit issued on form DH 4013 from the DOH county health department in the county where the maintenance entity is located.

(11) Sidewall infiltrative surfaces - the horizontal projection of the drainfield measured from the invert of the drainfield distribution pipe to the bottom infiltrative surface, or to 30 inches below finished grade, whichever is less.

(12) Total drainfield depth - the vertical distance from the bottom of the drainfield to the top of the drainfield.

(13) Treatment component - any arrangement of equipment and/or material that treats sewage in preparation for further treatment and/or disposal. Treatment components may incorporate a disposal component.

(14) Treatment performance standards -

(a) Performance standards for effluent from performance-based treatment systems consist of three criteria:

1. Annual average concentration is the arithmetic mean of the results of all effluent samples taken within the previous 365 days, expressed as a concentration.

2. Individual sample - result of analysis of one effluent sample, whether grab sample or composite sample, expressed as a concentration.

3. Percent removal – annual average removal of a pollutant from the discharge of the treatment system compared to the influent from the establishment. The influent stems from a septic tank or similar treatment compartment; percent removal= (1- effluent concentration/influent concentration)*100

(b) Treatment performance standards are established for five pollutants.

1. Carbonaceous biochemical oxygen demand after five days (CBOD₅), measured in mg oxygen per liter

2. Total suspended solids (TSS), measured in mg per liter

3. Total nitrogen (TN), the sum of nitrite, nitrate and total Kjeldahl nitrogen, measured in mg nitrogen per liter

4. Total phosphorus (TP), measured in mg phosphorus per liter

5. Fecal coliform, measured in colony forming units (cfu) or most probable number (MPN) per 100 mL

(c) Numerical values for several levels of common treatment performance standards for the five pollutants are defined in Table IX. Compliance during monitoring shall consist of meeting at least one of the three criteria. To

standards listed. For concentrations, better means lower, for percent removal, better means higher.

(15) Wastewater strength - the sum of the CBOD₅ and TSS concentrations.

TABLE IX
PERFORMANCE STANDARDS

<u>POLLUTANT</u>	<u>Domestic Sewage Waste Range</u>	<u>Baseline Septic Tank Effluent Standards</u>	<u>Baseline Treatment Standard 24" below bottom infiltrative surface</u>	<u>Aerobic Treatment Unit Effluent Standards</u>	<u>Secondary Treatment Effluent Standards</u>	<u>Advanced Secondary Treatment Effluent Standards</u>	<u>Florida Keys Nutrient Reduction Effluent Standards</u>	<u>Advanced Wastewater Treatment Effluent Standards</u>
<u>CBOD₅</u>								
<u>-annual average</u>	<u>300 mg/L</u>	<u>150 mg/L</u>	<u>10 mg/l</u>	<u>20 mg/l</u>	<u>20 mg/l</u>	<u>10 mg/l</u>	<u>10 mg/l</u>	<u>5 mg/l</u>
<u>-individual sample</u>	<u>500 mg/L</u>	<u>300 mg/L</u>	<u>20 mg/</u>	<u>60 mg/l</u>	<u>60 mg/l</u>	<u>30 mg/l</u>	<u>30 mg/</u>	<u>10 mg/l</u>
<u>-percent removal</u>	<u>not applicable</u>	<u>not applicable</u>	<u>95</u>	<u>90</u>	<u>90</u>	<u>95</u>	<u>95</u>	<u>97</u>
<u>TSS</u>								
<u>-annual average</u>	<u>200 mg/L</u>	<u>100 mg/L</u>	<u>30 mg/l</u>	<u>20 mg/l</u>	<u>20 mg/l</u>	<u>10 mg/l</u>	<u>10 mg/l</u>	<u>5 mg/l</u>
<u>-individual sample</u>	<u>500 mg/L</u>	<u>200 mg/L</u>	<u>100 mg/</u>	<u>60 mg/l</u>	<u>60 mg/l</u>	<u>30 mg/l</u>	<u>30 mg/l</u>	<u>10 mg/l</u>
<u>-percent removal</u>	<u>not applicable</u>	<u>not applicable</u>	<u>85</u>	<u>90</u>	<u>90</u>	<u>95</u>	<u>95</u>	<u>97</u>
<u>TN</u>								
<u>-annual average</u>	<u>100 mg/L</u>	<u>100 mg/L</u>	<u>70 mg/L</u>	<u>no requirement</u>	<u>no requirement</u>	<u>20 mg/l</u>	<u>10 mg/l</u>	<u>3 mg/l</u>
<u>-individual sample</u>	<u>150 mg/L</u>	<u>150 mg/L</u>	<u>100 mg/L</u>			<u>50 mg/l</u>	<u>40 mg/l</u>	<u>6 mg/l</u>
<u>-percent removal</u>	<u>not applicable</u>	<u>not applicable</u>	<u>30</u>			<u>50</u>	<u>62</u>	<u>90</u>

<u>TP</u>								
<u>-annual average</u>	<u>18 mg/L</u>	<u>18 mg/L</u>	<u>12 mg/L</u>	<u>no requirement</u>	<u>no requirement</u>	<u>10 mg/l</u>	<u>1 mg/l</u>	<u>1 mg/l</u>
<u>-individual sample</u>	<u>25 mg/L</u>	<u>25 mg/L</u>	<u>18 mg/L</u>			<u>20 mg/l</u>	<u>4 mg/l</u>	<u>2 mg/l</u>
<u>-percent removal</u>	<u>not applicable</u>	<u>not applicable</u>	<u>30</u>			<u>25</u>	<u>50</u>	<u>90</u>
<u>Fecal coliform</u>								
<u>-annual average</u>	<u>2.0E+6 cfu/ 100 ml</u>	<u>2.0E+6 cfu/ 100 ml</u>	<u>20 cfu/ 100 ml</u>	<u>no requirement</u>	<u>200 cfu/ 100 ml</u>	<u>200 cfu/ 100 ml</u>	<u>no requirement</u>	<u>1 cfu/ 100 ml</u>
<u>-individual sample</u>	<u>2.0E+7 cfu/ 100 ml</u>	<u>2.0E+7 cfu/ 100 ml</u>	<u>200 cfu/ 100 ml</u>		<u>800 cfu/ 100 ml</u>	<u>800 cfu/ 100 ml</u>		<u>25 cfu/ 100 ml</u>
<u>-percent removal</u>	<u>not applicable</u>	<u>not applicable</u>	<u>99.999</u>		<u>99.99</u>	<u>99.99</u>		<u>99.9999</u>

Footnotes to Table IX:

Footnote 1. Where chlorine is used for disinfection in a system designed to meet advanced wastewater treatment standard for fecal coliform the design shall include provisions for rapid and uniform mixing; and the total chlorine residual of at least 1.0 mg/l shall be maintained at all times. The minimum acceptable contact time shall be 15 minutes at the peak hourly flow. No individual sample shall exceed 5 mg/L TSS after the last treatment step before application of the disinfectant.

Footnote 2. Where chlorine is used for disinfection in a system designed to meet either the secondary treatment standard or the advanced secondary treatment standard for fecal coliform, the design shall include provisions for rapid and uniform mixing and a total chlorine residual of at least 0.5 mg/l shall be maintained after at least 15 minutes contact time at the peak hourly flow.

~~(1) Advanced Secondary Treatment Standards: A wastewater system with the following operational criteria:~~

~~(a) CBOD₅ and TSS~~

~~1. The arithmetic mean of the CBOD₅ or TSS values for the effluent samples collected (whether grab or composite technique is used) during an annual period shall not exceed 10 mg/l.~~

~~2. The arithmetic mean of the CBOD₅ or TSS values for a minimum of four effluent samples, each collected (whether grab or composite technique is used) on a separate day during a period of 90 consecutive days (quarterly) shall not exceed 12.5 mg/l.~~

~~3. The arithmetic mean of the CBOD₅ or TSS values for a minimum of four effluent samples, each collected (whether grab or composite technique is used) on a separate day of seven consecutive days shall not exceed 15 mg/l.~~

~~4. Maximum permissible concentrations of CBOD₅ or TSS values in any effluent grab sample at any time shall not exceed 20 mg/l.~~

~~(b) TN~~

~~1. The arithmetic mean of the TN values for the effluent samples collected (whether grab or composite technique is used) during an annual period shall not exceed 20 mg/l.~~

~~2. The arithmetic mean of the TN values for a minimum of four effluent samples, each collected (whether grab or composite technique is used) on a separate day during a period of 90 consecutive days (quarterly) shall not exceed 25 mg/l.~~

~~3. The arithmetic mean of the TN values for a minimum of four effluent samples, each collected (whether grab or composite technique is used) on a separate day of seven consecutive days shall not exceed 30 mg/l.~~

~~4. Maximum permissible concentrations of TN values in any effluent grab sample at any time shall not exceed 40 mg/l.~~

~~(c) TP~~

~~1. The arithmetic mean of the TP values for the effluent samples collected (whether grab or composite technique is used) during an annual period shall not exceed 10 mg/l.~~

~~2. The arithmetic mean of the TP values for a minimum of four effluent samples, each collected (whether grab or composite technique is used) on a separate day during a period of 90 consecutive days (quarterly) shall not exceed 12.5 mg/l.~~

~~3. The arithmetic mean of the TP values for a minimum of four effluent samples, each collected (whether grab or composite technique is used) on a separate day of seven consecutive days shall not exceed 15 mg/l.~~

~~4. Maximum permissible concentrations of TP values in any effluent grab sample at any time shall not exceed 20 mg/l.~~

~~(d) Fecal coliform—system operation shall result in not more than 200 fecal coliform colonies per 100 ml of effluent sample.~~

~~Where chlorine is used for disinfection, the design shall include provisions for rapid and uniform mixing and a total chlorine residual of at least 0.5 mg/l shall be maintained after at least 15 minutes contact time at the peak hourly flow. To determine compliance of a system, the following operational criteria (using either MF or MPN methods) are applicable.~~

1. The arithmetic mean of the fecal coliform colonies collected during the annual period shall not exceed 200 per 100 ml of effluent.

2. The median value of the fecal coliform colonies for a minimum number of 10 samples of effluent, each collected on a separate day during a period of 30 days (monthly) shall not exceed 200 per 100 ml of sample.

3. No more than 10% of the samples collected during the period of 30 consecutive days shall exceed 400 fecal coliform colonies per 100 ml of sample.

4. Any one sample shall not exceed 800 fecal coliform colonies per 100 ml of sample.

(2) Advanced Wastewater Treatment Standards: A wastewater system with the following operational criteria:

(a) CBOD₅ and TSS

1. The arithmetic mean of the CBOD₅ or TSS values for the effluent samples collected (whether grab or composite technique is used) during an annual period shall not exceed 5 mg/l.

2. The arithmetic mean of the CBOD₅ or TSS values for a minimum of four effluent samples, each collected (whether grab or composite technique is used) on a separate day during a period of 90 consecutive days (quarterly) shall not exceed 6.25 mg/l.

3. The arithmetic mean of the CBOD₅ or TSS values for a minimum of four effluent samples, each collected (whether grab or composite technique is used) on a separate day of seven consecutive days shall not exceed 7.5 mg/l.

4. Maximum permissible concentrations of CBOD₅ or TSS values in any effluent grab sample at any time shall not exceed 10 mg/l.

(b) TN

1. The arithmetic mean of the TN values for the effluent samples collected (whether grab or composite technique is used) during an annual period shall not exceed 3 mg/l.

2. The arithmetic mean of the TN values for a minimum of four effluent samples, each collected (whether grab or composite technique is used) on a separate day during a period of 90 consecutive days (quarterly) shall not exceed 3.75 mg/l.

3. The arithmetic mean of the TN values for a minimum of four effluent samples, each collected (whether grab or composite technique is used) on a separate day of seven consecutive days shall not exceed 4.5 mg/l.

4. Maximum permissible concentrations of TN values in any effluent grab sample at any time shall not exceed 6 mg/l.

(c) TP

1. The arithmetic mean of the TP values for the effluent samples collected (whether grab or composite technique is used) during an annual period shall not exceed 1 mg/l.

2. The arithmetic mean of the TP values for a minimum of four effluent samples, each collected (whether grab or composite technique is used) on a separate day during a period of 90 consecutive days (quarterly) shall not exceed 1.25 mg/l.

~~3. The arithmetic mean of the TP values for a minimum of four effluent samples, each collected (whether grab or composite technique is used) on a separate day of seven consecutive days shall not exceed 1.5 mg/l.~~

~~4. Maximum permissible concentrations of TP values in any effluent grab sample at any time shall not exceed 2.0 mg/l.~~

~~(d) Fecal coliform—system operation shall result in an effluent in which fecal coliform colonies (per 100 ml of sample) are below detectable limits. Where chlorine is used for disinfection, the design shall include provisions for rapid and uniform mixing; and the total chlorine residual of at least 1.0 mg/l shall be maintained at all times. The minimum acceptable contact time shall be 15 minutes at the peak hourly flow. To determine compliance of a system, the following operational criteria (using either MF or equivalent MPN methods) shall be applicable~~

~~1. Fecal coliform shall be below the detection limits for 75% of the samples collected over a 30 day period.~~

~~2. Any one sample shall not exceed 25 fecal coliform colonies per 100 ml of sample.~~

~~3. Any one sample shall not exceed 5.0 mg/l of TSS at a point before application of the disinfectant.~~

~~(3) Baseline system standards—A wastewater system with the following operational criteria:~~

~~(a) Effluent concentrations from the treatment tank:~~

~~1. CBOD₅—<240 mg/l~~

~~2. TSS—<176 mg/l~~

~~3. TN—<45 mg/l~~

~~4. TP—<10 mg/l~~

~~(b) Percolate concentrations from the baseline system prior to discharge to groundwater:~~

~~1. CBOD₅—<5 mg/l~~

~~2. TSS—<5 mg/l~~

~~3. TN—<25 mg/l~~

~~4. TP—<5 mg/l~~

~~(4) Bottom infiltrative surface—the vertical projection of the bottom surface of the drainfield that is no lower in elevation than 30 inches below grade.~~

~~(5) Composite sample—means a combination of individual samples of wastewater or effluent taken at selected intervals, generally hourly or less for some specified period, to minimize the effect of the variability of the individual sample.~~

~~(6) Grab sample—a sample which is taken from a wastestream without regard to the flow in the wastestream and over a period of time not to exceed fifteen minutes.~~

~~(7) Effective drainfield depth—the vertical distance from the bottom of the drainfield to the invert of the distribution pipe.~~

~~(8) Florida Keys nutrient reduction treatment—a treatment which will provide a recovered water product that contains not more, on a permitted annual average basis, than the following concentrations from a sampling point located following the final design treatment step of the onsite sewage treatment and disposal system:~~

~~1. Biochemical Oxygen Demand (CBOD₅)—10 mg/l~~

~~2. Suspended Solids——10 mg/l~~

~~3. Total Nitrogen, expressed as N—10 mg/l~~

~~4. Total Phosphorus, expressed as P——1 mg/l~~

~~(9) Innovative System—as defined by s. 381.0065(2)(g), F.S.~~

~~(10) Performance based treatment system—a specialized onsite sewage treatment and disposal system designed by a professional engineer with a background in wastewater engineering, licensed in the state of Florida, using appropriate application of sound engineering principles to achieve specified levels of CBOD₅ (carbonaceous biochemical oxygen demand), TSS (total suspended solids), TN (total nitrogen), TP (total phosphorus), and fecal coliform found in domestic sewage waste, to a specific and measurable established performance standard. This term also includes innovative systems.~~

~~(11) Performance System Maintenance Entity—any person or business entity which has been issued a written permit by the county health department and has been authorized by the design engineer or manufacturer of all treatment components used in the performance based treatment system and provides operation and maintenance services associated with performance based treatment system.~~

~~(12) Secondary Treatment Standards: A wastewater system with the following operational criteria:~~

~~(a) CBOD₅ and TSS~~

~~1. The arithmetic mean of the CBOD₅ or TSS values for the effluent samples collected (whether grab or composite technique is used) during an annual period shall not exceed 20 mg/l.~~

~~2. The arithmetic mean of the CBOD₅ or TSS values for a minimum of four effluent samples, each collected (whether grab or composite technique is used) on a separate day during a period of 30 consecutive days (monthly) shall not exceed 30 mg/l.~~

~~3. The arithmetic mean of the CBOD₅ or TSS values for a minimum of four effluent samples, each collected (whether grab or composite technique is used) on a separate day of seven consecutive days shall not exceed 45 mg/l.~~

~~4. Maximum permissible concentrations of CBOD₅ or TSS values in any effluent grab sample at any time shall not exceed 60 mg/l.~~

~~(b) Fecal coliform—system operation shall result in not more than 200 fecal coliform colonies per 100 ml of effluent sample.~~

~~Where chlorine is used for disinfection, the design shall include provisions for rapid and uniform mixing and a total chlorine~~

compliance of a system, the following operational criteria (using either MF or equivalent MPN methods) are applicable.

- ~~1. The arithmetic mean of the fecal coliform colonies collected during the annual period shall not exceed 200 per 100 ml of effluent.~~
- ~~2. The geometric mean of the fecal coliform colonies for a minimum of 10 samples of effluent, each collected on a separate day, shall not exceed 200 per 100 ml of sample.~~
- ~~3. No more than 10% of the samples collected during a period of 30 consecutive days shall exceed 400 fecal coliform colonies per 100 ml of sample.~~
- ~~4. Any one sample shall not exceed 800 fecal coliform values per 100 ml of sample.~~

~~(13) Sidewall infiltrative surfaces—the horizontal projection of the drainfield measured from the invert of the drainfield distribution pipe to the bottom infiltrative surface, or to 30 inches below finished grade, whichever is less.~~

~~(14) Total drainfield depth—the vertical distance from the bottom of the drainfield to the top of the drainfield.~~

~~(15) Wastewater strength—the sum of the CBOD₅ and TSS concentrations in the effluent.~~

Rulemaking Authority ~~381.0011(4), (13)~~, 381.0065(3)(a), FS. Law Implemented 381.0065, 381.0067, 386.041, FS. History—New 2-3-98, Amended 3-22-00, 06-18-03, 11-26-06, .

64E-6.026 Applications for Innovative system permits and System Construction Permits

(1) Applications for innovative system permits – Applications for innovative system permits shall be made using form DH 3143. The application and all supporting information shall be signed, dated and sealed by an engineer, ~~licensed in the State of Florida. Except as provided for in subsection 64E-6.028(3), F.A.C.,~~ A alternative drainfield materials and designs shall not be approved which would result in a reduction in drainfield size using the mineral aggregate drainfield system as described in Rule 64E-6.014, F.A.C., and the total surface area of soil at the bottom of the drainfield as the criteria for drainfield sizing comparisons. Applications shall include:

(a) through (b) No change

(2) Applications for system construction permits - All information required in Part I for an application for system construction permit shall be included as part of the application for a performance-based treatment system. All ~~Two copies of all~~ information shall be dated, signed and sealed by the ~~registered~~ engineer who designed the system, and provided to the department. Upon any change to the design, documentation ~~two copies~~ of any revisions shall be provided to the department and shall be dated, signed and sealed by the engineer. Additional information shall include the following:

(a) through (j) No change

(3) No change

Rulemaking Authority ~~381.0011(4), (13)~~, 381.0065(3)(a) FS. Law Implemented 381.0065, 381.0067, Part I 386 FS.

History—New 2-3-98, Amended 6-18-03, 11-26-06, 4-28-10, .

64E-6.027 Permits.

(1) through (4) No change

(5) System inspection – Before covering with earth and before placing the performance-based treatment system into service, a person installing or constructing any portion of the performance-based treatment system shall notify the county health department of the completion of the construction activities and shall have the system inspected by the department for compliance with the requirements of this chapter.

(a) Prior to ~~or concurrent with~~ a final installation inspection by the department, ~~an the professional engineer who designed the system, or the design engineer's designee, shall observe the entire installation and~~ shall certify in writing that the installed system complies with the approved design and installation requirements. This certification shall read as follows: "I certify that the engineering features of this performance-based treatment system have been examined by me and found to substantially comply with all specifications contained in the engineering design that was the basis for issuance of the construction permit. I certify that the operation and maintenance manual for this performance-based treatment system has been prepared or examined by me or by an individual(s) under my direct supervision and that there is reasonable assurance, in my professional judgment, that the system, when properly operated and maintained in accordance with this manual, will achieve the established performance standard and comply with all applicable statutory requirements and rules of the department".

(b) through (d) No change

(6) through (7) No change

Rulemaking Authority 381.0065(3)(a) FS. Law Implemented 381.0065, Part I 386 FS. History—New 2-3-98, Amended 4-21-02, 6-18-03, 6-25-09, 4-28-10, .

64E-6.028 Location and Installation.

Performance-based treatment systems shall be installed in compliance with the following.

(1) through (2) No change

~~(3) Drainfield designs: The following alterations to drainfield requirements shall be allowed for pressure dosed systems only.~~

~~(a) Long Term Acceptance Rate, also known as LTAR—LTAR's for sidewall infiltrative surfaces shall not exceed 1.25 times the bottom infiltrative surface LTAR for the same soil classification. Where the soil classification varies within the drainfield soil profile, the sidewall LTAR shall be adjusted accordingly. Sidewall infiltrative surfaces may be utilized only when a system is dosed a maximum of two times per day and the trench width is no greater than 18 inches.~~

~~(b) For septic tank effluent, maximum LTAR values shall not exceed the equivalent to the baseline standard for the soil classification in question. (see Table IX)~~

TABLE IX

~~Bottom/Sidewall Infiltrative Surface Maximum Equivalent LTAR's~~

Side LTAR: Bottom LTAR ratio =	1.25	1.25	1.25	1.25
Current trench bottom LTAR (gal/sq. ft/day) =	1.20	0.90	0.65	0.35
Trench width (inches) =	36.00	36.00	36.00	36.00
Effective sidewall height (inches) =	8.00	8.00	8.00	8.00
Total sidewall height (inches) =	12.00	12.00	12.00	12.00
Revised bottom LTAR (gal/sq. ft/day) =	0.77	0.58	0.42	0.23
New sidewall LTAR (gal/sq. ft/day) =	0.96	0.72	0.52	0.28

~~Footnotes to Table IX:~~

~~Footnote 1. Designs that utilize onsite open trench horizontal and vertical hydraulic conductivity testing to adjust the bottom and sidewall LTAR's shall be acceptable. The LTAR can be modified; however, the side LTAR: bottom LTAR ratio cannot exceed 1.25 for like soils.~~

~~Footnote 2. Designs that utilize established modeling techniques to determine the maximum effective capacity (design daily flow) of a designed drainfield system shall be acceptable.~~

~~Footnote 3. The horizontal and vertical projections of inclined surfaces cannot be considered for both sidewall and bottom credit in the same cross section. The designer must select one or the other.~~

~~Footnote 4. The current trench bottom LTAR's are from Part I, Table III, and are referred to as maximum sewage loading rates in Table III.~~

~~Footnote 5. Absorption beds shall be allowed providing the LTAR's are adjusted accordingly.~~

~~(e) through (e) No change~~

~~(4) through (5) Renumbered as (3) through (4) No change~~

Rulemaking Authority 381.0065(3)(a) FS. Law Implemented 381.0065, 386.041 FS. History—New 2-3-98, Amended 3-22-00, 6-25-09, .

64E-6.030 Fees.

(1) The following fees are required for services provided by the department.

- (a) Application and plan review for construction permit ~~for new system.~~ \$100
- (b) Application ~~and approval~~ for existing system, initial review. ~~if system inspection is not required.~~ \$35

- (c) ~~Application and~~ Existing System Evaluation. \$115 ~~50~~
- (d) Application for permitting of a ~~new~~ performance-based treatment system. \$125
- (e) Site evaluations:
 - 1. Standard site evaluation, does not include mean annual floodline determination. \$115
 - 2. Mean annual flood line determination during site evaluation. \$50
 - 3. Mean annual flood line determination if not conducted during site evaluation. \$115
 - 4. Additional soil profiles, per two profiles over standard two profiles. \$50
- (f) Site re-evaluation or excavation inspection. \$50
- (g) through (h) No change
- (i) Initial system construction inspection. \$75
- (j) through (x) No change
- (2) No change

Rulemaking Authority 154.06(1), 381.0066, 489.557(1) FS. Law Implemented 381.0065, 381.0066, 489.557 FS. History—
 New 2-3-98, Amended 3-22-00, 4-21-02, 5-24-04, 11-26-06, 9-24-07, .