

CERTIFICATION OF DEPARTMENT OF HEALTH
ADMINISTRATIVE RULES FILED WITH THE DEPARTMENT OF STATE

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TALLAHASSEE, FLORIDA

I hereby certify:

(1) That all statutory rulemaking requirements of Chapter 120, F.S., and all rulemaking requirements of the Department of State have been complied with; and

(2) That there is no administrative determination under Section 120.56(2), F.S., pending on any rule covered by this certification; and

(3) All rules covered by this certification are filed within the prescribed time limitations of Section 120.54(3)(e), F.S. They are filed not less than 28 days after the notice required by Section 120.54(3)(a), F.S.; and

(a) Are filed not more than 90 days after the notice; or

(b) Are filed more than 90 days after the notice, but not more than 60 days after the administrative law judge files the final order with the clerk or until 60 days after subsequent judicial review is complete; or

(c) Are filed more than 90 days after the notice, but not less than 21 days nor more than 45 days from the date of publication of the notice of change; or

(d) Are filed more than 90 days after the notice, but not less than 14 nor more than 45 days after the adjournment of the final public hearing on the rule; or

(e) Are filed more than 90 days after the notice, but within 21 days after the date of receipt of all material authorized to be submitted at the hearing; or

(f) Are filed more than 90 days after the notice, but within 21 days after the date the transcript was received by this agency; or

(g) Are filed not more than 90 days after the notice, not including days the adoption of the rule was postponed following notification from the Joint Administrative Procedures Committee that an objection to the rule was being considered; or

(h) Are filed more than 90 days after the notice, but within 21 days after a good faith written proposal for a lower cost regulatory alternative to a proposed rule is submitted which substantially accomplishes the objectives of the law being implemented; or

(i) Are filed more than 90 days after the notice, but within 21 days after a regulatory alternative is offered by the Small Business Regulatory Advisory Committee.

Attached are the original and two copies of each rule covered by this certification. The rules are hereby adopted by the undersigned agency by and upon their filing with the Department of State.

Rule Nos.:

64E-6.009

64E-6.012

Under the provision of Section 120.54(3)(e)6., F.S., the rules take effect 20 days from the date filed with the Department of State or a later date as set out below:

Effective Date: _____
(month) (day) (year)



Celeste Philip, MD, MPH

State Surgeon General, Florida Department of Health
Title

8
Number of Pages Certified

CERTIFICATION OF DEPARTMENT OF STATE
DESIGNATION OF RULE THE VIOLATION OF WHICH IS A MINOR VIOLATION

Pursuant to Section 120.695(2)(c)3, Florida Statutes, I certify as agency head, as defined by section 20.05(1)(b), Florida Statutes, that:

All rules covered by this certification are not rules the violation of which would be minor violation pursuant to Section 120.695, F.S.

The following parts of the rules covered by this certification have been designated as rules the violation of which would be a minor violation pursuant to Section 120.695, F.S.:

Rule No(s).

Rules covered by this certification:

Rule Nos.: 64E-6.009
 64E-6.012



Celeste Philip, MD, MPH

State Surgeon General, Florida Department of Health
Title

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CERTIFICATION OF MATERIALS INCORPORATED
BY REFERENCE IN RULES FILED WITH THE DEPARTMENT OF STATE

I hereby certify pursuant to Rule 1-1.013, Florida Administrative Code, that materials incorporated by reference in Rule 64E-6.012 have been:

(1) Electronically filed with the Department of State.

(2) That because there would be a violation of federal copyright laws if the submitting agency filed the incorporated materials described below electronically, a true and complete paper copy of the incorporated materials are attached to this certification for filing. Paper copies of the incorporated materials below may be viewed at the Florida Department of Health, Division of Disease Control & Health Protection, Bureau of Environmental Health, 4025 Bald Cypress Way, Suite 220, Tallahassee, Florida 32399-1710.

List form number(s) and form title(s), or title of document(s) below:

NSF/ANSI 40 – 2013 Residential Wastewater Treatment Systems

NSF/ANSI 245 – 2013 Wastewater Treatment Systems – Nitrogen Reduction

NSF/ANSI 350 – 2012 Onsite Residential and Commercial Water Reuse Treatment Systems

Under the provisions of Section 120.54(3)(e)6., F.S., the attached material(s) take effect 20 days from the date filed with the Department of State, or a later date as specified in the rule.



Celeste Philip, MD, MPH

State Surgeon General, Florida Department of Health
Title

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DEPARTMENT OF HEALTH
ADDITIONAL STATEMENT TO THE SECRETARY OF STATE

RULE NO.:	RULE TITLE:
64E-6.009	Alternative Systems
64E-6.012	Standards for the Construction, Operation and Maintenance of Aerobic Treatment Units

SUMMARY OF THE RULE

The proposed changes to Chapter 64E-6, Florida Administrative Code, provides for technical changes to the design of alternative systems and allows for the installation of nitrogen-reducing in-ground biofilters. The changes also allow for the installation of nitrogen-reducing aerobic treatment unit technology.

SUMMARY OF THE HEARING ON THE RULE

A public hearing was held on April 16, 2018 at 1:00 PM at the Department of Health. A summary of the hearing is attached.

STATEMENT OF FACTS AND CIRCUMSTANCES JUSTIFYING PROPOSED RULE

The proposed changes are based on proposals that have been reviewed and recommended for inclusion by the Technical Review and Advisory Panel and incorporate technical changes to the design of alternative systems and allow for the installation of nitrogen-reducing in-ground biofilters and nitrogen-reducing aerobic treatment unit technology. These changes will allow for the installation of systems meeting Department of Environmental Protection nitrogen-reduction goals pursuant to the Florida Springs and Aquifer Protection Act of 2016.

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64E-6.009 Alternative Systems.

Introductory paragraph – No change.

(1) through (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 19. No change.

20. All onsite sewage treatment and disposal systems that include a drip effluent disposal system and aerobic treatment unit or performance-based treatment system shall have a biennial operating permit, a maintenance contract with an approved ~~aerobic treatment system~~ maintenance entity, and shall be inspected in accordance with the requirements of this chapter.

21. through 25. No change.

26. Except for slopes required to meet the stabilization requirements of paragraph 64E-6.009(3)(f), F.A.C., the area over the drip irrigation drainfield shall be stabilized in the same way or vegetated with plant species specified by the design engineer. The species specified shall not include trees.

27. For drip emitter lines using non-pressure-compensating emitters, the maximum elevation difference shall be four inches between the highest and the lowest emitter in any individual line segment between the supply and the return line. For drip emitter lines using pressure-compensating emitters, there shall be no more than 18 inches of elevation difference between the highest and lowest emitter in any line. Neither property slope nor drip emitter line slope shall result in the depth of cover over the drip emitter lines to be outside of the range permitted in subparagraph 64E-6.009(5)(a)17, F.A.C.

28. 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 design engineer.

(b) No change.

(6) No change.

(7) In-ground Nitrogen-reducing Biofilters (INRB) – Nitrogen-reducing media layers, also referred to as media layers, may be placed beneath the drainfield provided the resulting system meets all requirements of this chapter except as noted in this subsection.

(a) Nitrogen-reducing media layers shall be installed as follows:

1. The drainfield shall be installed over sand fill material that is at least 18 inches thick and conforms to the textures and colors in subparagraph 10. below and shall extend at least one foot beyond the perimeter of the drainfield. The drainfield shall be centered above the sand fill area.

2. Below the sand fill material layer required in subparagraph 1. above there shall be a media layer that is at least 12 inches thick and extends beneath the entire drainfield absorption surface and extends at least 24 inches beyond the perimeter of any portion of the drainfield absorption surface and any other effluent release point. The media layer shall also extend upward along the boundary of the sand fill material to a point four to six inches below the bottom of the drainfield. The drainfield shall be centered above the media layer. The media layer shall conform with subparagraphs 8. and 11. below. The media layer shall not be installed when the observed water table is at or above the lowest depth of the media layer.

3. The bottom of the media layer shall be at least 6 inches above the wet season water table.

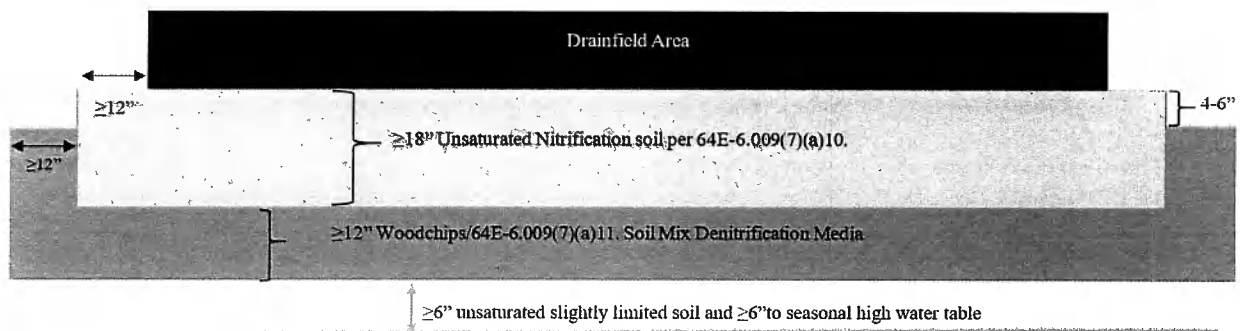


Figure 1. In-ground Nitrogen-reducing Biofilter media layer system

4. While media longevity and nutrient reduction may be enhanced by the use of low-pressure distribution, any Department-approved drainfield effluent distribution method may be used.

5. The natural and existing soil profile throughout the area of the drainfield shall indicate slightly limited soils extending from the ground surface to at least 6 inches below the bottom of the nitrogen-reducing media layer.

6. Only drainfield materials approved per Rule 64E-6.014 or Rule 64E-6.009, F.A.C. shall be used.

7. As measured vertically, no portion of the media layer required in subparagraph 2. above, shall be within 18

inches of the infiltrative surface of the drainfield.

8. An example of nitrogen-reducing media is lignocellulosic material such as chips or shavings of untreated lumber, blended urban waste wood mulch, yellow pine sawdust, or 2-inch to 3-inch wood chips. The nitrogen-reducing media shall be demonstrated in Florida-based studies to be effective at providing a substrate for denitrification.

9. The nitrogen-reducing media shall comply with the provisions of Rule 64E-6.0151, F.A.C.

10. The soil layer between the infiltrative surface of the drainfield and the media layer shall extend beneath the entire drainfield absorption surface and to a point at least one foot beyond the perimeter of any portion of the drainfield absorption surface and any other effluent release point and shall consist of fine aggregate having a texture of sand or fine sand but excluding:

a. those having color values less than or equal to 4 with chromas less than or equal to 3; or

b. those with colors on the gley charts.

11. The media layer shall be a combination of nitrogen-reducing media and fine aggregate, which shall be composed of 40-60% nitrogen-reducing media by volume, with the remainder to be fine aggregate. The media layer shall not be installed when the observed water table is at or above the lowest depth of the media layer. The fine aggregate to be mixed with the nitrogen-reducing media shall be one or more of the following textures: coarse sandy loam, sandy loam, loamy sand, fine sandy loam, very fine sand, loamy fine sand, and loamy very fine sand; and shall conform to the colors in subparagraph 10. above. The media layer shall be thoroughly mixed while the soil is in a non-plastic state, with the constituents uniformly distributed when installed.

12. Where the system has a total required drainfield size over 1500 square feet, the design engineer shall address the potential for mounding of the effluent between the drainfield and the bottom of the media layer at the estimated sewage flow and will increase the separation between the drainfield and the layer required in subparagraph 2. above, to ensure no less than 18 inches of unsaturated soil beneath the drainfield. A four-inch diameter observation port in the center of the drainfield shall be installed to monitor this parameter. The observation port shall be capped and lockable and installed within a protective surface cover. A toilet flange shall be securely attached to the bottom of the observation port to prevent the port from being inadvertently raised from its installed position. The observation port, including the flange, shall be perforated at the lowest elevation possible to allow accurate measurements. If installed within three feet of the sidewall of a bed or trench, the port shall be grouted to

prevent effluent from flowing down the outer surface of the port to the media.

13. Drainfield repair shall not necessitate media replacement provided the media has been in use for less than 10 years or if sampling within the previous 12 months shows denitrification at or above the target level for mean total nitrogen (TN) removal efficiency which shall be a minimum 65%.

14. Setback distances to the denitrification media or soil material directly above denitrification media extending to the infiltrative surface of the drainfield shall be reduced by the following:

a. Except for building foundations, vertical obstructions and pilings for elevated structures, where the required setback is ≤ 5 feet, the setback shall be reduced to one foot.

b. Where the required setback is ≥ 10 feet, the setback shall be reduced by five feet.

c. Setbacks to all other parts of the system shall be in compliance with the requirements in this Chapter and section 381.0065, Florida Statutes.

(b) In addition to the inspections required in Rule 64E-6.003, F.A.C., upon completion of the installation of the media layer but before covering the media layer, a person installing or constructing the system shall notify the Department's county health department office that the media layer has been installed and shall have that portion of the system inspected by the department. If the inspection of the media layer is the initial inspection of the system, the initial inspection fee in Rule 64E-6.030(1)(i), F.A.C., shall be paid. If an initial inspection occurred before the media layer inspection, the reinspection fee in Rule 64E-6.030(1)(j), F.A.C., shall be paid.

(c) Repairs of systems incorporating media layers shall meet the current standard for nitrogen reduction. The provisions of Rule 64E-6.003(3), F.A.C., shall not apply to repair of systems that include media layers, nor shall repairs be allowed per Rule 64E-6.015(3), F.A.C.

(d) Final installation approval shall not be granted until the county health department has confirmed that the property owner has executed and recorded in the public property records at the county courthouse, a written notice that informs all subsequent property owners of the use of the nitrogen-reducing media onsite system that may require special repair or maintenance procedures. The notice shall include the department's construction permit number for the system, and that additional information may be obtained by contacting the local county health department.

(7) through (10) renumbered (8) through (11) 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-6.012 Standards for the Construction, Operation, and Maintenance of Aerobic Treatment Units.

When aerobic treatment units are used for treating domestic and commercial sewage waste, each unit shall be installed, operated and maintained in conformance with the following provisions:

(1) Aerobic treatment units systems designed to treat up to 1500 gallons of sewage waste-per day shall be listed by a third party certifying program approved by the State Health Office. Aerobic treatment units shall be in compliance with at least one of the following standards: for Class I systems as defined by ANSI/NSF International Standard/American National Standard (NSF/ANSI) 40-2013, “Residential Wastewater Treatment Systems” Number 40, revised April 2013July 2000, herein incorporated by reference.; nitrogen reduction as defined by NSF/ANSI 245-2013, “Wastewater Treatment Systems – Nitrogen Reduction,” revised April 2013; or onsite residential and commercial water reuse treatment systems as defined by NSF/ANSI 350-2013, “Onsite Residential and Commerical Water Reuse Treatment Systems,” revised December 2012. These NSF/ANSI standards are hereby incorporated by reference, have been deemed copyright protected, and are available for inspection at the Department of Health, Bureau of Environmental Health, 4025 Esplanade Way, Tallahassee, Florida 32399-1710 or at the Department of State, R.A. Gray Building, 500 South Bronough Street, Tallahassee, Florida 32399-0250. An approved third party certifying program shall comply with the following provisions in order for units which it has certified to be approved for use in Florida:

(a) through (d) No change.

(e) Provide a registered certification mark or seal which must be affixed in a conspicuous location on the units it has certified. This mark or seal will alert persons evaluating or maintaining the unit that the unit is in compliance with the ANSI/NSF/ANSI sStandard appropriate for the application40.

(2) The following additional requirements shall also apply to the construction, design, and operation of aerobic treatment units treating 1500 gallons per day or less:

(a) No change.

(b) A minimum of a 4-inch diameter sampling access port located between the treatment unit tank outlet and the drainfield.

(c) No change.

(d) Each unit shall be designed or equipped so that regardless of unusual patterns or frequencies of sewage flow into the system effluent discharged to the drainfield will be in compliance with the applicable standards of subsection (1) above~~Class I effluent quality standards as defined by ANSI/NSF Standard 40.~~

(e) Minimum required treatment capacities for systems serving any structure, building or group of buildings shall be based on estimated daily sewage flows as determined from Table IV.

TABLE IV
AEROBIC SYSTEMS
PLANT SIZING

RESIDENTIAL:

Number of Bedrooms	Building Area in square feet	Minimum Required Treatment Capacity <u>Ggallons Pper Dday</u>
1 or 2	Up to 1200	400
3	1201-2250	<u>400</u> 500
4	2251-3300	<u>500</u> 600

For each additional bedroom or each additional 750 square feet of building area, or fraction thereof, treatment capacity shall be increased by 60 ~~100~~ gallons.

COMMERCIAL:

Estimated Sewage Flow in <u>Ggallons Pper Dday</u>	Minimum Required Treatment Capacity in <u>Ggallons Pper Dday</u>
0-400	400
401-500	500
501-600	600
601-700	700
701-750	750
751-800	800
801-1000	1000

1001-1200

1200

1201-1500

1500

Footnotes to Table IV

1. and 2. No change.

(f) No change.

(g) Effluent from an aerobic treatment unit shall be disposed of on the owner's property in conformance with other requirements of this chapter except as provided for in paragraph ~~64E-6.012(2)(f) above, F.A.C.~~ Effluent quality which is found to not meet its Class I standards as specified by ANSI/NSF Standard 40 shall be reported to the maintenance entity for correction within 10 working days.

~~(h) Units meeting Class I Standards as specified by ANSI/NSF Standard 40 shall receive consideration, via the variance review process, for use where daily domestic sewage flow limitations of Rule 64E-6.005, F.A.C., are exceeded or where a high level of sewage treatment is warranted. Also, for Class I units Wwhere slightly limited soil textures exist on a site, the required drainfield size may be reduced by 25 percent from the requirements in Rule subsection 64E-6.008(5) or Rule paragraph 64E-6.009(3)(d), F.A.C.~~

(i) through (n) No change.

(3) An aerobic treatment unit used for treating domestic or commercial sewage flows in excess of 1500 gallons per day, or a combination of aerobic treatment units treating flows according to Rule 64E-6.004(4)(a) or (b), F.A.C., shall be designed and certified by an engineer licensed in the State of Florida. The design shall include an assessment of wastewater strength. The certification shall state that the unit is capable of consistently meeting, at minimum, secondary treatment standards for CBOD₅ and TSS established by ~~DEP in Rule 64E-6.025(12)(a) 62-600.420, F.A.C.~~ In addition, the following requirements shall also be met:

~~(a) The drainfield system shall meet minimum setback and elevation requirements specified by this rule.~~

~~(a)(b)~~ The owner or lessee of a system shall comply with the applicable safety, maintenance and operational requirements of subsection ~~64E-6.012(2) above, F.A.C.~~ Unless the system owner or lessee is a state licensed wastewater treatment plant operator, the owner or lessee shall be required to have a system maintenance agreement with a permitted aerobic unit maintenance entity which has at least a Class D state certified operator who has been certified under the provisions of Chapter ~~62-602 61E12-41, F.A.C.~~

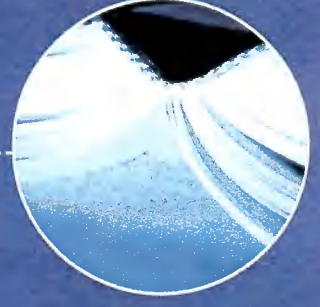
~~(b)~~(e) A permitted aerobic unit maintenance entity with a minimum Class D certified operator, or a system owner or lessee holding at minimum a Class D certification under the provisions of Chapter 61E12-41, F.A.C., shall collect effluent quality samples and submit the sample analysis reports to the DOH county health department. Effluent quality samples for CBOD₅, and suspended solids ~~and fecal coliform~~ shall be collected at least semi-annually and such samples shall be analyzed by a department-approved laboratory.

~~(c)~~(d) Written sample analysis reports shall be submitted to the DOH county health department by no later than the 15th of the next month following the semi-annual sampling period. However, if the sample analysis for CBOD₅ or suspended solids exceeds secondary treatment standards by more than 100 percent, the maintenance entity or certified operator shall notify the DOH county health department by telephone or in person within 24 hours after receipt of sample analysis results.

~~(d)~~(e) The DOH county health department shall monitor the maintenance and performance of aerobic treatments units as required by paragraph ~~64E-6.012(2)(m)~~ above, F.A.C.

(4) through (6) No change.

Rulemaking Authority 381.0065(3)(a), 489.553(3) FS. Law Implemented 381.0065, Part I 386 FS. History—New 3-17-92, Amended 1-3-95, Formerly 10D-6.0541, Amended 11-19-97, 4-21-02, 6-18-03, 5-24-04, 11-26-06, 6-25-09, 4-28-10, _____.



NSF/ANSI 40 - 2013
 Residential Wastewater
 Treatment Systems

*NSF International Standard /
 American National Standard*

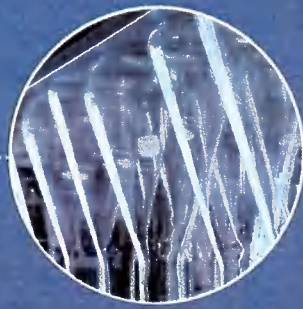
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Wastewater Treatment Systems - Nitrogen Reduction

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Onsite Residential and Commercial
Water Reuse Treatment Systems

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