TECHNICAL REVIEW AND ADVISORY PANEL

ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS
ADVISORY TO THE DEPARTMENT OF HEALTH
AUTHORITY: SECTION 381.0068, FLORIDA STATUTES

TECHNICAL REVIEW AND ADVISORY PANEL (TRAP) MEETING

DATE: Tuesday, December 10, 2019
TIME: 9 a.m. Eastern Time
PLACE: Conference Call
Teleconference Phone Number: 888-585-9008
At the prompt, enter the Conference Code: 200-983-436 #

THIS MEETING IS OPEN TO THE PUBLIC.

Agenda

1. Introductions and roll call

2. Review minutes from the October 23, 2019 meeting

3. Old Business
   a. TRAP Issue 19-08 Innovative System Permitting Process
      i. Protocol on Innovative System Permits
   b. TRAP Issue 19-09 Form Updates
   c. TRAP Issue 19-10 Aerobic Treatment Unit Updates
   d. TRAP Issue 19-12 Performance-Based System-Standards

4. New Business
   None.

5. Other items of interest to the Technical Review and Advisory Panel
   a. Tentatively None

6. Public Comment

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Kriss Kaye, *Professional Engineer*; Vacant, *Real Estate Industry*; Dewayne Bingham, Jr., *Septic Tank Industry*; Ron Davenport, *Septic Tank Manufacturer*
Glenn W. Bryant, *DOH County Health Department*; Robert Washam, *Consumer*; Scott Franz, *Soil Scientist*; Elias Christ, *Environmental Health*
Ronald Oakley, *Local Government*; Ken Odom, *Home Building Industry*; Roy Pence, *Home Building Industry*

TECHNICAL REVIEW AND ADVISORY PANEL (TRAP) MEETING MINUTES

DATE: Monday, October 23, 2019
PLACE: Conference Call

Members present were:

G. Will Bryant, *County Health Department*
Elias Christ, *Environmental Health*
Ron Davenport, *Septic Tank Manufacturer, Chair*
Roy Pence, *Home Building Industry*
Robert Washam, *Consumer Representative*

Alternate members present:
Scott Johnson, *Florida Engineering Society*

Absent members and alternates:

Dewayne Bingham, Jr., *Septic Tank Industry*
Scott Franz, *Soil Scientist*
Kriss Kaye, *Florida Engineering Society*
Ronald Oakley, *Local Government*
Ken Odom, *Home Building Industry, Vice Chair*
Stephen Shepard, *Septic Tank Manufacturer*
Joseph Sullivan, *Soil Scientist*

Department of Health (DOH) staff present:

Ed Barranco, *Environmental Administrator*
Robin Eychaner, *Environmental Administrator*
Dr. Eberhard Roeder, PE, *Environmental Manager*
Marcelo Blanco, *Environmental Manager*
Debby Tipton, *Environmental Consultant*
Alan Willett, *Environmental Consultant*

Others present:
Denworth Cameron, *Presby Environmental*
Pam Tucker, *Greater Orlando Realty USA, Inc.*
Dominique Buhot, *Green Environmental Services*

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1. CALL TO ORDER AND ROLL CALL

Robin Eychaner called the meeting to order at 1:02 p.m.
Roll call was completed and Robin also invited the members of the public introduce themselves. At the beginning of the meeting six panel members and/or their alternates were present.

2. REVIEW MINUTES OF LAST MEETING

The TRAP reviewed the minutes of the September 30, 2019 meeting conference call. Dominique Buhot asked that the spelling of his name and the name of his company be corrected. Pam Tucker asked for clarification on what was decided on in page four of four. Ron Davenport lead the discussion with the following results:

Will Bryant made a motion to approve the minutes as amended and the motion was seconded Bob Washam. Unanimously approved, motion passed, none opposed, minutes approved.

Scott Johnson asked for the agenda footer to be updated with Kriss Kaye's name instead of his. Robin indicated this was no problem to update.

3. OLD BUSINESS

a) Update on previous rule issues, provided by Ed Barranco.
The proposed language is moving forward for several issue numbers 19-01, 2, 4, 5, 6, and 7. The most notable in this group (commonly referred to as the 100 day rules) is adding new designs of In-ground Nitrogen-reducing Biofilter (INRB) systems that utilize liners and language authorizing existing systems compliance with Basin Management Action Plans (BMAP). The rule has come back from legal and we are working addressing their questions and providing needed clarifying language. Once completed, it will return to legal, move to the Surgeon General for review, and then for Florida Administrative Register (FAR) advertisement (Notice of Proposed Rule and Hearing date).

Pam Tucker asked for clarification on what Ed was saying on Issue 19-14, "that we talked about earlier." She indicated Ed had said, "after talking with Roxanne that item would trip our next" and she didn't catch the rest of the statement. Was this involving the innovative permitting section or something different?
Ed Barranco replied, yes, that's correct. We have another rule effort in motion that includes the innovative systems permit rule language with a protocol attached to it. Then there was 19-10 which is the ATU issue that was approved at the last meeting (discussion of 19-10 at the last meeting of September 30th) with a motion requesting we bring it to Roxanne to work on the language and have some further discussion on whether a home owner would have to file a notice with the county courts regarding when an ATU is used. Those two, plus issue 19-09 which brings in the forms that need to be associated with the innovative system permit rule and protocol. We are not going to include the language (now) in 19-14, separated out from 19-10, so it can be worked out and the other items in 19-10 can move forward as they are critically needed. We are also bringing in issue 19-13 for a later set of proposals.

4. New Business

a) TRAP Issue 19-09 Form Updates
Ed Barranco lead the introductions of the proposed revisions to the three forms.

Discussion on Form DH 3143 was as follows:
Scott Johnson recommends making the form clearer by adding a separate line for Business name and business contact name. Is it the business applying or the homeowner, this isn't clear. Anytime you can clarify how to fill out the application without instructions is better. Business name and contact name for the business. Specify who's email address should be included. Specify, whose mailing address.
Question 1, no comments.
Question 2, Scott Johnson commented on 2(h). should that be organization after the worked testing? Debby Tipton, yes, thank you.
Question 3, no comments.
Affirmation section, Ed Barranco indicated it should read "Signature of applicant or authorized Agent." Scott Johnson suggested adding a comma after the affirmation line and add "to the best of my knowledge." Also, you don't need the Month/Day/Year under the date line as it seems repetitive. Scott Johnson, can we make this form a fillable PDF document? Ed Barranco indicated yes, it can be and available on our website.

Discussion on Form DH 3144 was as follows:
Scott Johnson suggested specifying what kind of owner in the title. Ed Barranco suggested calling it "System Owner and adding the word "Form" after the word "Installation" in the title. Scott Johnson indicated the date line is too short. What if there are two owners, do both sign? Ed said let's add and "s" to owner (s). What if it's a business, there isn't enough room. What if there's no street address, or physical location? Property appraisers ID, what is acceptable? Ed Barranco indicated we will specify. Do you need to specify CHD and DOH? Are you not all DOH employees, do you need to specify? Ed Barranco indicated we can just put Department of Health (DOH) and it will make it clearer. It would read, "agree to allow staff of the Department of Health, and its local County Health Departments, and the manufacturer to enter my property……" Scott Johnson commented to make the line addressing problems or malfunctions consistent with how it is referred to in the paragraphs below, as it uses the term failures and not malfunctions. Is it one of these (malfunction or failure) or both? In the next bulk paragraph, add a comma after "period," the word "dated" before September, after necessary to "remove the failed system if necessary and"… install. Change "meeting" to "comply with." Where it says failure of a system "shall be," change "shall be" to "is." Then, after "is defined as" add a colon. Also, after 64E-6.002 delete "or" because you have a string of a, b, and c. On page 2, suggest removing the word "Sincerely" and change to "Acknowledged," add an "s" to "owner"(s) and "signature"(s), and under property owner Signatures add business title and name. Pam Tucker suggested adding "printed name" under property owner(s). Bob Washam inquired is there any concern with change of ownership of these systems? Ed Barranco, yes, we would have to explain this to the new owners. The discussion that ensued involved multiple panel members, DOH staff, and members of the public. Ed Barranco summarized the discussion with the comment, yes, we can add a statement requiring the owner(s) to notify DOH and the manufacturer, when there is a change in the property ownership. Additionally, at the end of the form, in the area under instructions, we will sync-up the terms owner(s) and signature(s) as we did similarly in the other section of this form.

Discussion on Form DH 3145 was as follows:
Much of the upper portion of the form was proposed to be struck, as this information will be contained in the application details, which the CHD will be forwarding the application to the State Health Office with this form. The sentence above the area "For State Health Office Review Only," Scott Johnson suggested adding the term "manufacturer", delete the word "of" and recommended this be sent to the CHDs for feedback, since they will be the ones completing the form. Ed Barranco proposed restating the beginning of the sentence as "Has the manufacturer or agent for the innovative system permit," . Scott Johnson also commented that maybe a

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general description and the site number may be enough, but it may be necessary to include manufacturer name, model number, and city in the description to help better identify the site. Pam Tucker asked if any innovators were asked about this and inquired if Roxanne (Groover) had provided input. Debby Tipton reported that Roxanne Groover indicated earlier in the day, she would be submitting her comments on today's issues via email.

Will Bryant made a motion to approve 19-09 with the amendments made in the discussion and based on the minutes for this meeting, the motion was seconded by Bob Washam. Unanimously approved, motion passes, none opposed.

b) TRAP Issue 19-13 Lot Densities and Platted

Denworth Cameron asked using the adjacent lot compacted areas, should we just limit this definition to what the legal description that describes the property to be? Ed Barranco explained, when reviewing the site plan for a new subdivision, we need to determine if the subdivision is legal, so we look at the plat. We are not into plat approvals, but we need to look at the plat. We can add the pro rata. We are taking the language in the rule about what the lot is and the language in the statute that talks about no more than four lots per acre. The sum of four lots, if it comes up to less than an acre, when you add the pro rata share to the smallest four lots, then you have a better chance that there are not going to be smaller than four lots per acre. Scott Johnson, is this verbatim out of the Statute 381? Ed Barranco replied, part of it is. Here is what the statute says, ss. 381.0065(4)(b) "Subdivisions and lots using a public water system as defined in s. 403.852 may use onsite sewage treatment and disposal systems, provided there are no more than four lots per acre, provided the projected daily sewage flow does not exceed an average of 2,500 gallons per acre per day, and provided that all distance and setback, soil condition, water table elevation, and other related requirements that are generally applicable to the use of onsite sewage treatment and disposal systems are met." We are having to interpret what the statute says that subdivisions and lots, with public water, may use onsite systems provided there are no more than four lots per acre. Our interpretation is what we have attempted to put in this definition.

Ed Barranco continued to explain, in addition, in rule 64E-6.005(7) (b), in (b) it states, "The determination of lot densities under section 381.0065(4)(b), F.S., shall be made on the basis of the net acreage of the subdivision which shall exclude from the gross acreage all paved areas and prepared road beds within public or private rights-of-way or easements and shall also exclude surface water bodies." In this case, it talks about excluding the paved areas and excluding the water bodies, and that's what we did with this definition. We also allow in this definition to include the contiguous unpaved and non-compacted road rights-of-way, which is borrowed from another rule subsection 64E-6.005(7)(c), where we talk about the maximum sewage flows based on your type of water system. We allow you to add to your lot the pro rata portion of the none compacted rights-of-way. We are requiring the areas that is frankly unusable because it is flooded or compacted to be taken out, and then we are very specifically telling you how to do it. Take the four-lot grouping, with the smallest cumulative area, to determine the overall density and then where that grouping does not meet an acre, it does not meet the test. Scott Johnson commented, on line 5 it seems in order to have the ability to consider this, the subdivision must be on public water, so it should say it must be served by a public water system. Instead of shall be, it should say "is defined." Also, it should say "rights-of-way." Also, it should indicate which side of the right's-of way or refer to the centerline of the rights-of-way. If it's a curb and gutter subdivision with a sidewalk and it's a 4-5 foot wide sidewalk along the edge rights-of-way. It would cut off what is between the road and the sidewalk, so then you have no adjacent area correct? Pavement is not a suitable area for a septic system. Ed Barranco, we had not considered including the side walk. We can work on clarification there, to address the compacted area of the sidewalk.

Roy Pence inquired if there has been a challenge related to this? Ed Barranco, no, not to date that I know of. I do not know if it has been challenged in the last 30 years, but I do not think so.

We are to be working from the rule and that is why we decided to move it into a rule. The methodology is in memo and we are proposing to get the methodology into the rule. There is a statutory provision, that took us out of subdivision approval some years ago. Now, in section 381.0065(4)(q) it states, “The department may not require any form of subdivision analysis of property by an owner, developer, or subdivided prior to submission of an application for an onsite sewage treatment and disposal system.” We were no longer allowed to review these plats and approve or deny these plats until the time it comes to us for an application as an onsite sewage and treatment disposal system. Roy Pence asked when you would analyze an individual lot within a subdivision, that’s already platted, that subdivision has not gone through any prior approval or review process by the Department of Health. Is it possible, under this narrative you’re talking about, that you will have platted lots that could either be a quarter acre or more, but because one of those lots in a grouping of four lots is not, then they all are not allowed? Ed Barranco rephrased the question: Is there a possibility that there are subdivisions that were approved and don’t meet this methodology, exceeding four lots per acre? Roy Pence, yes. Ed Barranco, continued, well, there is a good possibility we have that out there. In general, we work with areas/subdivisions we know are in existence. When we run into an area, we are not familiar with, then we need to verify it meets the requirements. This is when we would apply the methodology. The four lots must be conterminous and if those four add up to less than an acre that would be a problem. This would apply to new subdivisions.

Scott Johnson made a motion to table. Ed asked if he could present the other definition included in the issue before they make a decision. Ron Davenport asked him to continue. Ed presented the term platted. We have a property that was created in 1956. In 2019 the property is sold, and the new owner subdivides it into two lots. It was initially a 1/3 of an acre lot, which now becomes two 0.1666 acre lots. Now, the department is presented with a permit application to put in a septic system. In this situation, the property lost its original platting, it now becomes a subdivision in 2019. This new configuration of two lots of 0.1666 acres are now going to be recorded as 2019 plat book X. Having said that, the owner comes the department and wants to argue the land was platted in 1956. Our answer is yes it was platted in 1956, but in 2019 you changed the dimensions and replaced it with a new recent date of platting. Platted is the date a lot is placed into its current configuration and dimensions including changes to its previous legal description. Roy Pence, what about recorded easements for that property? You basically have changed the legal description for that property. Eb Roeder, I think we have not looked at easements as a change to the plat date. Ed Barranco, yes, we will have to make sure. While it may change the legal description, it does not change the plat date. General discussion ensued between Roy Pence and Ed Barranco about looking more into it as this involves more than just a typical OSTDS issue. Bob Washam mentioned a lawsuit the Department lost related to this. It also required the owner of the lot to get a variance. The Judge did not have this definition of a lot to work from. Scott Johnson commented the legal descriptions was a great question and hopefully just the wording can change, so it still gets back to current configurations and dimensions. You can have a utility easement on the back behind the property and that is still not changing the effective plat date. We have the word “platted” and maybe we are able to use “effective plat date” instead.
Scott Johnson made a motion to table Issue 19-13 and Roy Pence seconded it. Unanimously approved, motion passes, none opposed.

c) TRAP Issue 19-14 Aerobic treatment unit property record notice
   - Pulled language from 19-10

Issue 19-14 was not heard. The panel had reached the timeframe set for the meeting and decided to adjourn.

5. Other items of interest to the TRAP

None.

6. PUBLIC COMMENT

Members of the public were free to speak during the meeting and did so. There was no additional public comment.

Scott Johnson made a motion to adjourn and Elias Christ seconded the motion. Meeting Adjourned at 4:04 p.m.

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19-08 ISSUE FOR TECHNICAL REVIEW AND ADVISORY PANEL CONSIDERATION

Printed 12/5/2019 9:03:22 AM

Next Trap Meeting: 12/10/2019

Subject: Innovative System Permit Process

Rule Sections: 64E-6.001; 6.002; 6.004;6.009; 6.0152 6.012; 6.025; 6.026; 6.027; 6.028; 6.029; 6.0295

Issue:	The current issue is regarding a need for standardizied streamlined process to more expidiciously issue permits for innovative systems with a strong link to innovative systems evaluation results. The Chapter 120, of the Florida Statutes can be legnthy and the Department would like to have a process identified in rule that meets these new criteria, which would provide a more time-efficient process. Formerly TRAP Issues 08-09 and 10-11.
Issue Originated By:	Ed Barranco
Purpose and Effect	The proposed changes will Reduce Common Roadblocks to Permitting, Address Common Rule Violations in Code, Provide Clearer Expectations, as well as, Standardize Monitoring Protocols and Evaluation Criteria.
Proposed Rule Change:	(See Attached)
Summary:	Reduce Common Roadblocks to Permitting Address Common Rule Violations in Code Provide Clearer Expectations Standardize Monitoring Protocols and Evaluation Criteria
Possible Financial Impacts:	None.
Date New:	5/3/2019
Initially Reviewed by Trap:	8/27/2019
Tabled by Trap:	8/27/2019
Trap Review Finished:	8/27/2019
Variance Committee Reviewed:	11/7/2019
Trap Review Variance Comments:	11/7/2019
Trap Final Decision:	12/10/2019
Final Outcome:	
Comments:	Discussed by TRAP 5/28/19 Proposed language being presented at 8/27/19 meeting. On 8/27/19 the very rough draft language was presented. They made many great comments and had many good discussions. The decision was made to have DOH take the language back and make some edits and then represent the changes at the next TRAP meeting in September. RE 8/29/19 Must be ratified at 9/30/19 meeting due to issue with FAR advertisement. RE 9/30/19 meeting ratified. Issue 19-08 presented a second time at 9/30/19

meeting. Passed TRAP with clarification edits. Issue ready for variance committee.RE
11/7/19 received two comments from the Variance Board, one suggesting a change. Edit made. RE12/2/19

Ready for Rule ☐
In Rule ☐
Rule Date:

TRAP Issue 19-08

Innovative System Permit Process

64E-6.001 General

64E-6.004 Application for System Construction Permit

64E-6.009 Alternative Systems

64E-6.0152 Innovative Systems

64E-6.025 Definitions

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

64E-6.027 Permits

~~64E-6.0295 Innovative System Reclassification~~

64E-6.001 General.

(1) The provisions of Part I (rules 64E-6.001-6.016, F.A.C.) of this chapter apply to all areas of the state except where specific provisions in part II (rules 64E-6.017-6.0182, F.A.C.), addressing the Florida Keys, or specific provisions in part IV (rules 64E-6.025-6.029~~5~~, F.A.C.), addressing performance-based treatment systems, exempt or modify compliance with part I. Part III (rules 64E-6.019-6.023, F.A.C.) addresses the registration of septic tank contractors and authorization of partnerships and corporations. Part V (rule 64E-6.030, F.A.C.) addresses fees for services throughout the chapter. The provisions of this chapter must be used in conjunction with chapter 381 and part III of chapter 489, F.S.

(2) though (7) 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, 7-16-13, XX-XX-XX.

64E-6.004 Application for System Construction Permit.

(1) though (7) No change.

(8) Innovative Systems must be permitted per rule 64E-6.0152. ~~or new product approval for onsite sewage treatment and disposal systems shall be initiated by submittal of an application for permit using Form DH 3143, Jan. 94, hereby incorporated by reference. DOH county health departments are authorized to issue installation permits upon receipt of the temporary permit. Form DH 3144, Jan 94, and Form DH 3145, Jan 94, hereby incorporated by reference, shall be used to record information that describes notification requirements between the temporary permit applicant, the DOH county health department, and the State Health Office. These forms are to be processed by the DOH county health departments.~~

(9) 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, XX-XX-XX.

64E-6.009 Alternative Systems.

(1) through (7) No change.

(8) Alternative system component and design approval – ~~After innovative system testing is completed,~~ Rrequests for approval of system components and designs which are not specifically addressed in this chapter and not required to comply with rule 64E-6.0152 must be in writing and~~shall~~ be submitted to the department's ~~Bureau of~~ Onsite Sewage Program~~s~~ Office.

(a) Requests for non-innovative alternative system component material and design approval must~~shall~~ include:

1. Detailed drawings and design and material specifications for the component; ~~Detailed system design and construction plans by an engineer licensed in the State of Florida,~~

2. Proposed monitoring procedures; and ~~Certification of the performance capabilities of the product submitted by an engineer licensed in the state of Florida,~~

3. An owner's manual, an installation manual, an operation and maintenance manual, and inspection procedures.~~Research supporting the proposed system materials,~~

~~4. Empirical data showing results of innovative system testing in the State of Florida; and,~~

~~5. A design, installation and maintenance manual showing how to design and install the system in accordance with this chapter for standard, filled, mounded, gravity-fed, dosed, bed and trench configurations.~~

(b) through (c) No change.

(d) For disposal components, the proposed comparability rating must not exceed 2.5. The comparability rating is the ratio of the design value of an absorption surface of mineral aggregate to the actual absorption surface of the disposal component. ~~Except as provided for in Part IV of this chapter, 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.~~ For disposal alternative components where treatment and disposal coexist, additional reductions per Rule 64E-6.028(4), F.A.C, are not permitted. Alternative system component and design approvals shall not be granted for the following items:

1. Those which, in whole or in part, are used to achieve a more advanced level of treatment than the baseline treatment level specified in part IV of this chapter,

2. Aerobic treatment units,

3. Septic tank designs, filters, seals, and sealants,

4. Additives,

5. Header and drainfield pipe, including their layout; and,

6. Water table separation and setback requirements.

(e) No change.

(f) Prior to the installation of the first alternative system component in each county, the manufacturer of an alternative system component, or their agent that has been authorized in writing, must provide training on the system component to the Onsite Sewage Program Office and at least one certified inspection staff of the county health department. Training must include installation procedures, and be provided free of charge.

Commented [ERL1]: Variance (Alt) Member Roxanne Groover commented: Approved. Still believe this will cause a challenge. Especially with DOH staff.

(9) 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, 7-31-18, XX-XX-XX.

64E-6.0152 Innovative Systems

(1) Prior to an innovative system being used in any manner with an onsite sewage treatment and disposal system, the applicant proposing to have the innovative system approved for use in Florida must make application to the Onsite Sewage Program Office (OSP) using Form DH 3143, 08/19, herein incorporated by reference. If all applicable requirements are met, an Innovative System Permit (ISP) will be issued by the OSP. The ISP will be for a specified testing period and contain requirements for the innovative system to be installed. The department's Protocol on Innovative Systems, October 2019, is hereby incorporated by reference, and is referred to as "Protocol" in this section.

(2) Innovative system applications require a demonstration of the innovative product's efficacy prior to the testing in paragraph (2)(a), below. Where data from previous testing only meets the criteria in 4.B. of the Protocol, the applicant must install and monitor one system to demonstrate the innovative product's efficacy; or the applicant may provide sufficient data as defined by Protocol. Once the innovative product's efficacy has been determined, additional system testing is required as stated in this section.

(a) No less than three innovative systems for treatment components and fifteen innovative systems for disposal components will be tested for a specified time period to be determined based on the individual application, to demonstrate the system will function properly and reliably to meet the requirements of this chapter and section 381.0065, FS. The maximum number of systems allowed under

the ISP will be twelve for treatment components and seventy for disposal components. Modifications to innovative system design is not allowed during testing required by this subsection.

(b) During innovative system testing, the innovative product must be tested as constructed by, and in the manner intended for use by the manufacturer. When installed, the entire system, including the innovative product itself, must comply with all required setbacks, separation to seasonal high water table, effective soil depth and loading rates. For disposal components, the proposed comparability rating must not exceed 2.5. The comparability rating is the ratio of the design value of an absorption surface of mineral aggregate to the actual absorption surface of the innovative disposal component. Any other regulatory requirement that is not part of the innovative product or does not have direct bearing on the innovative product being tested must be installed in compliance with all applicable regulations.

(c) Treatment components, which have already been approved and will be installed as meeting the requirements of rule 64E-6.012(1), are not required to obtain an ISP, provided the treatment component's proposed performance, as a performance-based treatment system, is not better than the certified treatment component's average performance reported for $CBOD_5$, TSS, and total nitrogen reduction in the applicable NSF standard completion reports.

(3) The applicant for the ISP will be the permit holder and will be held responsible for all information supplied to the department. The signed application and submission of all required information serve as the basis by which the department determines the issuance of the ISP. Applications for an ISP must be made to the OSP on Form DH 3143 08/19 and must be accompanied by all required exhibits and fees, including all information required in the Protocol. Once the ISP has been issued, no modifications are allowed to the ISP application. While the permit is entitled an ISP, and the entire system can be innovative, it is recognized that where the innovative part is an individual item placed within and intended to be used as part of or in conjunction with the system, and not the entire system, that individual item is that part which is termed innovative.

(a) The applicant must respond in writing to requests for additional information within 45 calendar days after receipt of the request. If the applicant fails to comply with this requirement, the application will

Commented [ERL2]: Variance Member Maurice Barker Commented: Suggest 45 or even 90 days for applicant to respond. 30 days seems a little short.

Commented [ERL3R2]: Ok, changed to 45 calendar days.

be deemed complete and the department will complete processing of the application based on the information it has received.

(b) Modifications to the innovative system application after testing has begun will require an applicant to provide a new application, along with necessary exhibits and fees.

(c) An ISP issued by the OSP on or after the effective date of this rule is valid for five years from the date of issue.

(d) ISPs issued more than five years prior to the effective date of this rule expire 180 days after the effective date of this rule. An applicant having a previously issued ISP that will expire per this paragraph can apply for a new ISP prior to the expiration of their current permit, and must include a new application, including all required exhibits and fees.

(e) The applicant receiving an ISP per paragraph (c) may request a one-time extension for a second five-year period, at no cost. The extension request must be received by the OSP at least 90 days prior to the ISP expiration date and must include a statement from the applicant that the conditions under which the original ISP was issued have not changed. If conditions have changed, or if the extension request has not been received per this paragraph, extensions will not be allowed, and a new application and fee will be required.

(4) Innovative System Permitting - Innovative system permit issuance is the responsibility of the OSP. Where the innovative system applicant requires any form of maintenance on the innovative system, a template of a maintenance contract to be used with each system tested must be included in the application. The applicant must provide in the maintenance contract template how and when the maintenance is to be performed, any determining factors which influence the decision to perform required maintenance, and must allow any septic tank contractor or state-licensed plumber to provide maintenance, as long as the ISP applicant has provided training and written authorization to the septic tank contractor or state-licensed plumber. ISPs that intend to be classified as a performance-based treatment system require an approved maintenance entity that will perform all required maintenance on the system.

(a) For innovative systems requiring a maintenance contract, the applicant must train and certify in writing a maintenance entity. During ISP testing, the maintenance entity is not considered a maintenance entity as used in s. 381.0065(3)(n) F.S. The applicant may have more than one certified maintenance entity. Any change in certification status must be reported by the applicant to the OSP.

(b) An innovative system cannot be used as a component to any performance-based treatment system where any benefit is to be received per rule 64E-6.028, F.A.C. However, where an innovative treatment component is used to enhance what would otherwise be a permittable PBTS, the treatment component may be used to further treat the sewage, but no additional treatment level will be recognized. The component being tested does not receive benefits per 64E-6.028, F.A.C.

(5) ISP incorporation into construction permits issued by county health departments - After the OSP has approved the ISP, DOH county health departments are authorized to issue system construction permits for individual onsite sewage treatment and disposal systems that include the innovative systems. The ISP applicant must comply with the training requirement in rule 64E-6.009(8)(f). The county health department must receive a complete application in accordance with Parts I or IV, of Chapter 64E-6, F.A.C and review the application in accordance with all appropriate requirements. All innovative system permit requirements must be incorporated into the construction permit. The innovative system applicant must concurrently notify the OSP when an application is submitted to the county health department.

(a) The design and installation must comply with the conditions of the ISP and the following additional criteria:

1. Innovative systems are allowed in repair, existing-modification and new construction permits, however all application and construction standards for new systems must be met. All flow must be directed into the innovative system and split flow systems are not allowed.

2. Construction permit applications which include innovative systems or components, require a separate plan for a system that does not include the innovative system being used, which can include removal of the innovative system and installation of the non-innovative system. This will include a site plan that shows both systems and how they will be installed in relationship to each other, and how the

other system will replace the innovative system should it not perform in compliance with the design. This can be done using the same application, but as a different proposal, which is required to be used if, or when, the innovative system does not perform in compliance with the design. Where the innovative system will be replaced by the non-innovative system, it will be permitted and inspected as a new system.

(b) As part of the construction permit application, the system owner must complete form DH 3144, 10/19, herein incorporated by reference, and provide it to the CHD.

(6) Innovative System Testing-

After ISP issuance, the applicant must provide quarterly reports to the OSP which includes a tabular summary of installations and testing, and information on the progress of the innovative system evaluation. Reports are due by the 21st day of the month following the completion of a standard calendar quarter. A standard calendar quarter includes the months January through March; April through June; July through September; and October through December. If the 21st day of the month falls on a weekend or holiday, the deadline will be the close of the following business day. Failure to submit quarterly reports within 31 days of the end of the quarter will be considered in violation and subject to fines per s.381.0061, FS. Where any failure or malfunction of the innovative system itself, or the septic tank system to which it is attached is found, the applicant is required to report the incident to the OSP within five working days.

(7) Following the installation and testing of the number of systems required by the innovative system permit, and the submission of all required information or results, the applicant may request classification of their innovative system by the OSP. Only systems that received final approval from the county health department and were occupied during the entire testing can be used in the department's evaluation for classification. The department will approve the classification request only if the department is satisfied that the system will reliably perform to the standards for which it is being approved. Evaluation criteria will be per the department's Protocol. Requests for classification must include the following:

(a) Specification of the proposed classification (treatment, disposal, both);

(b) Complete results and analysis of testing of all systems installed. Results must be in a spreadsheet compatible with department software;

(c) Complete observations of system performance;

(d) Complete records regarding maintenance, repairs or modifications performed on any systems;

(e) All comments from the maintenance entities, system users, and design engineers (if applicable). The innovative system applicant must contact these parties and all users by email and specifically request their comments regarding their experience in the use and operation of the system, to include any issues or problems that were noted;

(f) Comments from the county health departments in the counties where the systems were installed. CHDs will provide comments to the OSP using the criteria in paragraph (e), above;

(g) Monitoring procedures; and

(h) An owner's manual, an installation manual, operation and maintenance manual, and inspection procedures updated based on testing experience and level applied for classification and that comply with requirements of 3.D. of the department's Protocol.

Rulemaking Authority 381.0011(13), 381.006, 381.0065(3)(a) FS. Law Implemented 381.0065, 381.0067, 386.041 FS. History–New XX-XX-XX.

64E-6.025 Definitions.

(1) through (8) No change.

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

(9~~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 $CBOD_5$ (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) through (15) change to (10) through (14).

64E-6.026 Applications for Performance-Based Treatment ~~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., 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) A monitoring protocol designed to validate that the system will perform to the engineer's design specifications.~~

~~(b) Compelling evidence that the system will function properly and reliably to meet the requirements of this chapter and section 381.0065, F.S. Such compelling evidence shall include one or more of the following from a third-party testing organization approved through the NSF Environmental Technology Verification Program:~~

~~1. Side stream testing, where effluent is discharged into a system regulated pursuant to chapter 403, F.S.~~

~~2. Testing of systems in other states with similar soils and climates.~~

~~3. Laboratory testing.~~

(2) and (3) renumbered to (1) and (2) 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, XX-XX-XX.

64E-6.027 Permits.

~~(1) Innovative System Permit – An application for system construction permit for an innovative system cannot be reviewed until the innovative system permit has been approved specifying the number of systems and time limits. The department's decision to grant or deny the innovative system permit shall be~~

~~based on the presence or absence of compelling evidence that the innovative systems will function properly and reliably to meet the requirements of this chapter and section 381.0065, F.S.~~

(2) Renumbered to (1) No change.

(2~~3~~) Within 15 working days after the department receives a completed application for a performance-based treatment system, the county health department must either issue a permit for the system or must~~shall~~ notify the applicant that the system does not comply with the performance criteria, and refer the application to the ~~Bureau of~~ Onsite Sewage Program~~s~~ Office, who must~~shall~~ review the application for a determination whether the system should be approved, disapproved, or approved with modifications. The determination of the engineer for the ~~Bureau of~~ Onsite Sewage Program~~s~~ Office must~~shall~~ prevail over the action of the local county health department. ~~All applications for a construction permit for an innovative system shall be reviewed for completeness by the county health department and referred to the Bureau of Onsite Sewage Programs for review and approval, disapproval or approval with modifications.~~

(4) through (7) Renumbered to (3) to (6) 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, XX-XX-XX.

~~64E-6.0295 Innovative System Reclassification.~~

~~(1) Following the installation and monitoring of the number of systems allowed by the innovative system permit, the applicant may request reclassification of their innovative system by the Bureau of Onsite Sewage Programs. Requests for reclassification as an alternative system component and design shall be made in accordance with subsection 64E-6.009(7), F.A.C. Requests for reclassification as a performance-based treatment system shall include the following:~~

~~(a) Results and analysis of monitoring of the systems installed.~~

~~(b) Observations of system performance.~~

~~(c) Maintenance, repairs or modifications performed on any systems.~~

~~(d) Comments from the system operators or users.~~

~~(e) Comments from the design engineers who designed the individual system designs.~~

~~(f) Comments from the county health departments in the counties where the systems were installed.~~

~~(g) Specification of the proposed classification as performance-based.~~

~~(h) Rationale for the proposed type of classification desired.~~

~~(i) Proposed monitoring protocol.~~

~~(j) A sample manual addressing the siting, design, installation, inspection, operation, maintenance and abandonment procedures.~~

~~(2) The Bureau of Onsite Sewage Programs shall process the request in accordance with chapter 120, F.S. The department shall approve the request only if the department is satisfied that the system will reliably perform to the standards desired under normal operating conditions as demonstrated by the information provided.~~

~~*Rulemaking Authority 381.0011(13), 381.006, 381.0065(3)(a) FS. Law Implemented 381.0065, 381.0067, 386.041 FS. History–New 6-18-03.*~~Renumbered to 64E-6.0152 XX-XX-XX.

Department of Health Protocol on Innovative System Permits
October 2019

1. INTRODUCTION

This Protocol establishes the requirements for innovative system permits (ISPs) in accordance with Rule 64E-6.0152 Florida Administrative Code (FAC) and DH Form 3143.

2. DEFINITIONS

As used in the protocol, the words or terms have the following meanings:

(1) **Disposal component**: arrangement of equipment and/or materials that distributes effluent within a drainfield.

(2) **Independent**: no employee/employer or subsidiary relationships or other relationships that represent a conflict of interest between the entity collecting data and the innovative system permit applicant.

(3) **Proposed performance level**: the specific performance measure identified in the test plan that the applicant claims the proposed technology can meet and that is being evaluated during innovative system testing.

(4) **Proposed technology:** materials, devices or techniques proposed by the applicant to be installed and tested and that serve as whole or as part of an onsite sewage treatment and disposal system. The technology is characterized as a system treatment component, system disposal component, or both.

(5) **Proprietary technology:** a proposed technology protected by patent or trademark.

(6) **Public domain technology:** a proposed technology not protected by patent or trademark.

(7) **Reliability target**: the frequency of test system observations required to show that the proposed technology meets the proposed performance level reliably as described in Section 5 of this document.

(8) **Testing organization:** the entity that implements testing of the proposed technology.

(9) **Test plan:** a written document that describes the procedures for innovative system testing as described in Section 3.G of this document.

(10) **Test system:** an installation of the proposed technology for the purposes of innovative system testing.

(11) **Tested parameter:** an observation of interest required to evaluate whether a test system can meet the proposed performance level in accordance with the reliability target, such as effluent concentration, sewage disposal, or other applicable measurable and specific measure of functioning.

(12) **Treatment component:** any part of an innovative system that is intended by the applicant to provide sewage treatment. A treatment component may coexist within or after a disposal component.

3. INNOVATIVE SYSTEM APPLICATION REQUIREMENTS

Application for an ISP must include all items required by rule 64E-6.0152 FAC and Form DH 3143, 08/19. Requirements for items on Form DH 3143 are listed below.

A. DATA FROM PREVIOUS TESTING

Data from previous testing must include all known results from testing on performance and reliability of the proposed technology, including observations of failure as defined by Rule 64E-

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6.002, FAC. For treatment components, reported results must include all individual sampling data, average, median, concentrations and flows. For disposal components, reported results must include all measurements of water levels within the disposal component, estimated or measured hydraulic and biological loading rates, and surfacing observations. The data must meet minimum requirements in section 4.

B. AN AFFIDAVIT BY THE APPLICANT CERTIFYING THAT THE TECHNOLOGY SUBMITTED FOR APPROVAL IS THE SAME AS THE TECHNOLOGY FOR WHICH TESTING DATA ARE PROVIDED.

If there are differences between the technology as it was tested and the technology as it is submitted for approval, the applicant must identify this to the department.

C. DESIGN CRITERIA

Design criteria must include a description of the proposed technology and its function mechanism, detailed design drawings, structure, material specifications, drawings of the configuration or configurations of the proposed technology to be tested, the design treatment capacity, and the proposed performance level. Configuration describes variations in the geometry, elevation and influent supply, such as installations in subsurface, filled or mound systems, trench or bed geometry, and gravity, lift-dosing or low-pressure dosing influent supply. The design criteria must address sizing the technology to estimated sewage flows ranging from 200 to 5000 gallons per day and to differing domestic and commercial wastewater strengths and characteristics. For disposal components, the design criteria must also include a comparability rating. The comparability rating is the ratio of the design value of an absorption surface of mineral aggregate to the actual absorption surface of the innovative disposal component.

D. PRODUCT LITERATURE

Product literature must include the following:

1. An owner's manual including the system's model designation; a functional description of system operation; a list of household substances that could adversely affect the system or the environment; operating instructions, methods to be used to identify system malfunction; electrical schematics (if applicable); instructions for extended periods of non-use; and a description of service policies.
2. An installation manual, including a process overview; a list of components, electrical wiring schematics (if applicable); installation requirements and procedures, repair or replacement instructions; and detailed start-up procedures.
3. An operation and maintenance manual , including a maintenance schedule (if required), detailed procedures for evaluation of system components and system effluent, and methods for collecting effluent samples for treatment components. When maintenance is required by subsection 64E-6.0152(4), F.A.C., the manual must include a trouble shooting guide, a guide for repairing and replacing all system components, and a template of a maintenance contract.
4. Inspection procedures previously used by the applicant to inspect the test system installation to ensure it is properly installed.

The applicant must provide product literature that complies with departmental regulations.

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E. WARRANTY.

A warranty by the applicant to the owner of an installed test system must provide and pay all costs for system permitting, engineering services, contractor equipment, and material and labor necessary to secure permits and install a department-approved non-innovative system meeting new system requirements in Chapter 64E-6, FAC. The duration of the warranty must be for five years from the date of final approval of the installed test system or for the duration of testing, whichever happens first.

F. CONSUMABLES MEETING REQUIREMENTS OF 64E-6.0151, AND ESTIMATED REPLACEMENT INTERVALS AND METHODS, IF APPLICABLE

G. TEST PLAN

All test plans must identify the testing organization and provide testing protocols. The testing organization must be independent and have knowledge and experience in conducting such testing.

Test plans must include the proposed performance level and tested parameter(s) of the technology to be tested. The proposed performance level for treatment components must include at least one annual average/individual sample level for at least one of the parameters specified in Rule 64E-6.025(10), FAC, and no failure of the system as defined in section 64E-6.002, FAC. The proposed performance level for disposal components, at a minimum, will be that water levels measured within the disposal component will not exceed 6" above the absorption surface and no failure of the system as defined in section 64E-6.002, FAC. Some technologies may require additional other test parameters and performance levels depending on their design and treatment levels.

Procedures to address system malfunction and replacement, premature termination of the testing protocol and innovative system evaluation, and criteria for removal of the system at the end of the evaluation or warranty period must also be provided.

Test plans must address the following: method of water use monitoring, sampling/monitoring points for all measurements to obtain complete and representative observations, sampling/monitoring procedures, testing schedule and duration, and field observations including indicators of failure. Where a single component is intended to provide both treatment and disposal functions, the applicant must adhere to the disposal component criterion for the number of tested systems.

Test plans will vary depending on data from previous testing provided under 3.A of this document. Where data from previous testing meet requirements of 4.A of this document, the following sections 3.G.I and 3.G.II apply to the test plan. Where data from previous testing only meet requirements of 4.B. of this document, one system must be tested in Florida first to generate data meeting the requirements of 4.A. In this situation, the test plan must include testing procedures to collect the data meeting requirements of 4.A. The one system tested in Florida must achieve the proposed performance level before testing can continued as required by Rule 64E.0152 (2), F.A.C. The one system tested must be included as one of the required number of systems to be subsequently innovatively tested and sampled.

I. TESTING FOR TREATMENT COMPONENT EFFECTIVENESS

Testing for treatment component performance effectiveness must provide valid influent and effluent sampling data from a minimum of four quarterly testing events gathered from each of at least three test systems. If influent sampling is demonstrated by the applicant not to be feasible, nutrient removal effectiveness may be assessed assuming average total nitrogen

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concentrations and total phosphorus concentrations of 55 and 10 mg/L, respectively. Quarterly testing events must occur at least 10 weeks and no more than 16 weeks apart. Test plans must identify the standard methods proposed for the analysis of each test, what parameters will be analyzed in the laboratory, what parameters will be measured in the field, and what laboratory will be used. The laboratory identified for testing must either be accredited by a recognized National Environmental Laboratory Accreditation Program (NELAP) accreditation body or maintain a comprehensive quality assurance program that, at a minimum, complies with the requirements of ISO/IEC Guide 17025 General Requirements for the Competence of Calibration and Testing Laboratories, and demonstrate it is qualified to perform the assigned analyses in accordance with required methods. Test plans for treatment components must include submission of quality assurance procedures. These must include blank and duplicate sample collection in the amount of at least 10% and chain of custody procedures.

II. TESTING FOR DISPOSAL COMPONENT EFFECTIVENESS

Testing for disposal components must result in valid measurements of water levels within the disposal component from a minimum of four viable quarterly testing events gathered from at least 15 test systems. Quarterly testing events must occur at least 10 weeks and no more than 16 weeks apart.

At least one system must be tested each in a moderately and a slightly limited soil texture. Not all combinations of soil textures and configurations must be tested. If the proposed comparability rating varies by soil texture or configuration, at least 80% of the systems must be tested in the soil texture and configuration combination with the highest comparability rating.

H. AN EVALUATION REPORT BY AN INDEPENDENT THIRD-PARTY TESTING ORGANIZATION OR A FLORIDA LICENSED ENGINEER

4. REQUIREMENTS FOR DATA FROM PREVIOUS TESTING

Data from previous testing must either meet requirements of 4.A. or meet requirements of 4.B. Where only the requirements of 4.B. are met, one system must be tested in Florida meeting requirements of 4.A for data from previous testing in order to evaluate if it will meet the proposed performance level.

A. REQUIREMENTS FOR DATA FROM PREVIOUS TESTING – LEVEL A

The data must meet **all** the following conditions:

(a) Full-scale testing with an average measured daily domestic or commercial strength sewage waste flow as defined by Rule 64E-6.003(13) and (15), FAC, of at least 200 gallons per day and not more than 5000 gallons per day.

(b) The results of previous testing include all influent and performance observations conditions for at least one test system. Treatment component testing must include influent and effluent observations within ten or more separate calendar weeks over a duration of at least 168 days. Disposal component testing must include at least monthly observations for at least 12 months.

The results must show that the average of each test system meets the proposed performance level and the minimum number of individual data points meet the designated performance level as required by Section 5.

(c) The testing of the system must meet all of the following criteria:

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i) The testing organization is independent. The testing organization must provide all data to the Onsite Sewage Program Office.

ii) The testing organization has knowledge and experience in conducting such testing. Testing during EPA's national demonstration projects or testing by government agencies and contractors for government agencies that regulate onsite sewage components or wastewater treatment will be deemed to comply. Testing by entities that perform certification testing for organizations accredited to ISO/IEC 17065:2012 (Conformity assessment - Requirements for bodies certifying products, processes and services) also will be deemed to comply. Other entities, including department-accredited analytical laboratories, faculty or staff of an accredited college or university, must provide documentation demonstrating staff competence, knowledge and experience in environmental testing.

iii) The testing protocol and its implementation are documented and provide standardized procedures and standards to show how objectives such as completeness, accuracy and precision are met. Testing according to ANSI-standards or certification standards required for approval in other states or countries, or during EPA's national demonstration projects shall be deemed to comply with this criterion. Documentation for testing of treatment components must include chain-of-custody procedures and certification of analytical laboratories providing data as described in 3.G, if applicable.

B. REQUIREMENTS FOR DATA FROM PREVIOUS TESTING – LEVEL B

The results of previous testing include all influent and performance observations for at least one test system. Treatment component testing must include influent and effluent observations. Test data meets Level B requirements if the following criteria are met: a) the test system achieves the proposed performance level as described in section 3.G; b) using the following scoring criteria, the data set scores at least 10 if it is a treatment component and at least 8 if it is a disposal component, where sampling and lab criteria do not apply; and c) the data set cannot score a zero on any attribute. Data must be associated with domestic strength sewage, unless the component is specifically intended for different strengths.

Scoring criteria: In Table 1, for each data set attribute, assign the point rating. Sum up point ratings for all attributes.

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TABLE 1. SCORING CRITERIA FOR LEVEL 4.B. DATA

Point rating (PR)	Sewage	Tested flows	Amount of data collected on test parameter*	Qualifications and independence of entity collecting data	Sampling documentation and lab documentation (if applicable)
PR = 0	Non-sewage	< 1 gpd	Data collected within less than five separate calendar weeks over a duration of less than 90 days	Unknown or data collected by sampler with no training	Unknown or undocumented sampling and lab procedures
PR = 1	Synthetic sewage	1 up to 20 gpd	Data collected within five to seven separate calendar weeks and over a duration of 91-120 days	Data collected by trained personnel of applicant or other non-independent entity	Sampling and lab procedures are documented, but not consistent with standard methods as published by the American Public Health Association or Environmental Protection Agency
PR = 2	Real sewage off-site	20 to <200 gpd, or > 5,000 to 50,000 gpd)	Data collected within eight to ten separate calendar weeks and over a duration of 121-167 days	Data collected by independent entity with training.	Sampling and lab procedures are documented, and consistent with standard methods as published by the American Public Health Association or Environmental Protection Agency
PR = 3	Real sewage on-site	≥200 to 5,000 gpd	Data collected within ten or more separate calendar weeks over a duration of 168 or more days	Data collected by independent entity with experience complying with requirements of 4.A.(c) ii	Sampling procedures are documented and consistent with 4.A.(c).iii. Lab is certified to NELAP or ISO.

*A calendar week is a block of seven days beginning with Sunday and ending with Saturday. If only one condition is met, the lower point rating will apply.

5. DATA REQUIREMENTS FOR CLASSIFICATION

Data collected on test systems during innovative testing must meet reliability targets for the proposed performance level specified in the test plan to pass innovative system testing.

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1. Treatment Component Reliability Targets

For treatment components to pass innovative system testing, they must a) achieve the annual average reliability target and b) achieve the individual sample reliability target specified in the test plan.

I. ANNUAL PERFORMANCE STANDARD RELIABILITY TARGETS

For each test system, the median of each tested parameter must be compared to the annual average proposed performance level to determine if the level is achieved or not. The minimum number of test system medians must meet the annual average proposed performance level according to Table 2.

II. INDIVIDUAL SAMPLE RELIABILITY TARGETS

Each individual test parameter result must be compared to the individual sample proposed performance level to determine if the level is met for each individual sample. The minimum number of individual samples must meet the individual proposed performance level according to Table 3.

2. Disposal Components Target

The results of each test system will be compared to the proposed performance level. The minimum number of individual samples must meet the proposed performance level according to Table 4.

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TABLE 2. *MINIMUM NUMBER OF TEST SYSTEM MEDIANS REQUIRED TO MEET THE ANNUAL PROPOSED PERFORMANCE LEVEL*(TREATMENT COMPONENTS)*

Total Number of Test Systems	Number of Test System Medians Required to Meet the Proposed Performance Level (Annual)		Total Number of Test System	Number of Test System Medians Required to Meet the Proposed Performance Level (Annual) **
3	3		31	20
4	4		32	20
5	4		33	21
6	5		34	21
7	6		35	22
8	6		36	22
9	7		37	23
10	8		38	23
11	8		39	24
12	9		40	25
13	9		41	25
14	10		42	26
15	10		43	26
16	11		44	27
17	12		45	27
18	12		46	28
19	13		47	28
20	13		48	29
21	14		49	29
22	15		50	30
23	15		51	31
24	16		52	31
25	16		53	32
26	17		54	32
27	17		55	33
28	18		56	33
29	18		57	34
30	19		58	34

**The target is to be 90% confident that more than 50% of data points meet the proposed performance level. Median system treatment performance compared to average treatment standard in 64E-6.025.*

*** Based on normal approximation to the binomial distribution. For larger number of system tested use (minimum meeting=round (number systems *(0.5+1.28*Sqrt(0.5*(1-0.5)/number systems))+0.5).*

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TABLE 3. ***MINIMUM NUMBER OF DATA POINTS REQUIRED TO MEET THE INDIVIDUAL PROPOSED PERFORMANCE LEVEL*(TREATMENT COMPONENTS)***

Total Number of Individual Data Points	Number of Data Points Required to Meet the Proposed Performance Level (Individual)		Total Number of Individual Data Points	Number of Data Points Required to Meet the Proposed Performance Level (Individual)**
10	10		40	34
11	11		41	35
12	11		42	36
13	12		43	36
14	13		44	37
15	14		45	38
16	15		46	39
17	16		47	40
18	16		48	40
19	17		49	41
20	18		50	42
21	19		51	43
22	20		52	43
23	20		53	44
24	21		54	45
25	22		55	46
26	23		56	47
27	24		57	47
28	24		58	48
29	25		59	49
30	26		60	50
31	27		61	51
32	28		62	51
33	28		63	52
34	29		64	53
35	30		65	54
36	31		66	55
37	32		67	55
38	32		68	56
39	33		69	57

**The target is to be 90% confident that more than 75% of the data points meet the proposed performance level. Grab sample treatment performance compared to grab sample standard in 64E-6.025.*

*** Based on normal approximation to the binomial distribution. For larger number of data points use (minimum meeting=round (number systems *(0.75+1.28*Sqrt(0.75*(1-0.75)/number systems))+0.5).*

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TABLE 4. ***MINIMUM NUMBER OF SYSTEMS REQUIRED TO MEET THE PROPOSED PERFORMANCE LEVEL (DISPOSAL COMPONENTS)***

Total Number of Test Systems	Number of Systems Required to Meet the Proposed Performance Level		Total Number of Test Systems	Number of Systems Required to Meet the Performance Level**
15	15		42	41
16	16		43	42
17	17		44	43
18	18		45	44
19	19		46	45
20	20		47	45
21	21		48	46
22	22		49	47
23	23		50	48
24	24		51	49
25	25		52	50
26	26		53	51
27	27		54	52
28	28		55	53
29	29		56	54
30	30		57	55
31	31		58	56
32	31		59	57
33	32		60	57
34	33		61	58
35	34		62	59
36	35		63	60
37	36		64	61
38	37		65	62
39	38		66	63
40	39		67	64
41	40		68	65

**The target is to be 90% confident that more than 90% of the data points meet the proposed performance level. System hydraulic functioning without excessive ponding.*

*** Based on normal approximation to the binomial distribution. For larger number of data points use (minimum meeting=round (number systems *(0.9+1.28*Sqrt(0.9*(1-0.9)/number systems))+0.5).*

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19-09 ISSUE FOR TECHNICAL REVIEW AND ADVISORY PANEL CONSIDERATION

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Next Trap Meeting: 12/10/2019

Subject: Form Updates

Rule Sections: 64E.0152 Innovative Systems (new)

Issue:	Forms need to be updated and included in the new rule section for innovative systems: DH 3143 94' and DH 3144 94''.
Issue Originated By:	Ed Barranco
Purpose and Effect	The proposed changes to update the forms to reflect the new rule standards. The new form numbers will be DH 3143 08/19 and DH 3144 08/19.
Proposed Rule Change:	(See Attached)
Summary:	Updating form numbers DH 3143 and DH 3144 to reflect revised rule standards.

Possible Financial Impacts:	none
Date New:	10/1/2019
Initially Reviewed by Trap:	10/23/2019
Tabled by Trap:	
Trap Review Finished:	10/23/2019
Variance Committee Reviewed:	11/7/2019
Trap Review Variance Comments:	12/10/2019
Trap Final Decision:	
Final Outcome:	

Comments: 10/23/19 accepted by TRAP with Edits. Send to Variance committee. RE
11/5/19 DOH legal indicated we should drop form DH 3145, since it is not incorporated by rule and only a DOH internal form. RE
11/7/19 Reviewed by Variance Board. No comments. RE 12/2/19

Ready for Rule	☐
In Rule	☐
Rule Date:	

STATE OF FLORIDA
DEPARTMENT OF HEALTH
INNOVATIVE SYSTEM PERMIT ~~ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM TEMPORARY PERMIT~~ APPLICATION

Business Name _____

Applicant Contact Name _____ Phone # _____
(Last, First, M.I. ~~or Business Name~~)
Email Address _____ Fax # _____

~~Applicant~~ Mailing Address: _____
(Street Address or P.O. Box) ~~(Business name)~~

_____
~~(Street Address or P.O. Box)~~ (City) (State) (Zip)

Authorized Agent Business Name (if applicable) _____
Authorized Agent Contact Name _____
(Last, First, M.I)
Email Address _____ Phone # _____

Mailing Address: _____
(Street Address or P.O. Box)

_____
(City) (State) (Zip)

1. Identify the proposed technology for innovative testing, and if it is a sewage treatment component, disposal component, both, or other. ~~List name, type and model number of innovative system or product~~ (may ~~A~~attach by addendum). Only one proposed technology per application. Applications are not transferrable.

_____
_____
_____

2. Supply the following ~~minimum~~ information as described in Section 3 of the department's Protocol on Innovative Systems, October 2019:

A) Data from previous testing~~Research and development studies~~;
B) An affidavit by the applicant certifying that the technology submitted for approval is the same as the technology for which testing data are provided~~Results of previous testing~~;
C) Design criteria ~~and installation criteria~~;
D) Product literature~~Performance and reliability data~~;
E) Warranty~~A disinterested third party certifier report, or a Florida Registered Engineer report~~;
F) Consumables meeting requirements of Rule 64E-6.0151, FAC and estimated replacement intervals and methods, if applicable~~Copy of system or product warranty;~~.
G) Test plan;
H) An evaluation report by an independent third-party testing organization or a Florida-licensed engineer.

1. **3.** A fee in accordance with the current fee schedule ~~will be charged upon application~~ for an innovative system permit application. See rule 64E-6.030, Florida Administrative Code for fees.

~~If the above information is not available or determined to be insufficient by the department and a temporary permit is issued for further testing and monitoring then a fee in an amount not to exceed $25,000.00 as authorized under~~

~~section 381.0066, Florida Statutes, will be agreed upon prior to application approval. This fee covers the department's cost associated with the performance evaluation of the innovative system or product~~.

I affirm the information contained in this application is true, to the best of my knowledge.

Signature of a~~A~~pplicant ~~signature~~ or authorized agent ~~representative~~ of applicant:~~, if applicant is other than an individual~~:_____

Title:_____

Date:_____

FOR OSP OFFICE USE ONLY	Notes: _____ _____ _____ _____	Application Check No._____ Date of Application Check:_____ Check Amount: $_____

Instructions for Form DH 3143

All information must be legible.

Applicant contact name is the person serving as a contact to the business.

If the applicant authorizes an agent, they must do so in writing. Should the authorized agent who signed the application cease their association with the applicant or business, the applicant must immediately notify the Onsite Sewage Program Office of the change and supply the name(s) of any other person they intend to act as an authorized agent, if any.

DEPARTMENTAL USE ONLY

1) Application Number:_____
2) Application Received By:_____ Date:_____
3) Reviewed By:_____ Date:_____
4) Additional Information Requested..... Y/N Date:_____
   Information Needed:_____
5) Application Complete ..... Y/N Date:_____
   Application Approved..... ☐ Date:_____
7) Temporary Permit Issued..... Y/N Date:_____
8) Application Denied ..... ☐ Date:_____
   Reason for Denial:_____

Reviewed By:_____ Date:_____
Title:_____

STATE OF FLORIDA
DEPARTMENT OF HEALTH
PROPERTY OWNER ACKNOWLEDGEMENT OF INNOVATIVE SYSTEM INSTALLATION FORM

_____
(date)

_____County Health Department

_____
(Street Address or P.O. Box)

_____
(City) (State) (Zip)

Attention: Environmental Health Director or
OSTDS Program Coordinator

I(print name(s)) _____, property owner(s) of the residence or business property located at (give ~~physical location or~~ street address or legal description if street address is not available):

_____

_____,

_____,

understand that the proposed Onsite Sewage Treatment and Disposal System to serve my property is permitted as an innovative system by the Department of Health (DOH).

I agree to allow staff~~agents~~ of the DOH~~Florida Department of Health~~, its~~the~~ local County Health Department (CHD) ~~and the manufacturer~~ to enter my property during normal working hours or any other agreed upon time~~at reasonable hours~~ for the purpose of monitoring this system.

I agree that I will not hold DOH or its local~~or the~~ _____ CHD responsible if this innovative system malfunctions.

I agree that I will notify the local _____ CHD of any problems, ~~or~~ malfunctions or failure I observe or am made aware of with this innovative system.

I agree that I will notify DOH, its local CHD, and the manufacturer if there is a change of property ownership.

I also understand that if the innovative system fails within the warranty~~five year testing~~ period, as required in the department's Protocol on Innovative Systems, October 2019, the manufacturer of the test system will be responsible for all costs necessary to remove the failed system (if needed) and install a ~~providing a certified installer who will provide contractor equipment, material and labor necessary to modify the system or repair the system with~~ an

DOH-approved system complying with all new construction standards~~at no additional cost to me~~. It is also my understanding that I will be responsible for landscape restoration if a new DOH-approved system is to be installed. For the purposes of this evaluation, failure of a system is~~shall be~~ defined as: a) by section 64E-6.002, F.A.C.; b) creating a sanitary nuisance as defined by chapter 386, Florida Statutes; or c) the test system fails to function to the manufacturer's specifications as approved in the innovative system permit.~~as any system that meets one or more of the following criteria: 1) systems that have been increased in size after installation for reasons other than erroneous application information; 2) systems that experience effluent surfacing and sewage backing up into the house plumbing; and 3) systems described by homeowner as having a sluggish performance during wet weather or observed to have soggy, waterlogged soils above the drainfield attributed to sewage effluent. The failure definition shall include persistent electrical or mechanical device malfunctions. It is also my understanding that I will be responsible for landscape restoration.~~

Acknowledged~~Sincerely~~,

_____

Property Owner Name(s) (printed)

_____

Contact Name and title, if applicable (printed)

_____

Property Owner Signature(s)

_____

Date

Instructions for completing Form DH 3144.

All information must be legible.

This form must be completed by the owner of the property where the innovative system will be installed for testing. If the property owner is a business, the contact name and title of the person filling out the form on behalf of the business must be provided.

19-10 ISSUE FOR TECHNICAL REVIEW AND ADVISORY PANEL CONSIDERATION

Printed 12/5/2019 2:21:19 PM

Next Trap Meeting: 12/10/2019

Subject: Aerobic Treatment Unit Updates

Rule Sections: 64E-6.012 Standards for the Construction, Operation, and Maintenance of Aerobic Treatment Units.

Issue:	Several issues are addressed: referenced standards are out of date;approval process for aerobic treatment units can be lengthy, in part due to slow response times by applicants, in part due to slight differences in requirements between 64E-6 and referenced standards; Table IV is unclear about how to size multiple residential dwelling units served by one ATU, drainfield size reduction for large ATUs is not addressed
Issue Originated By:	Eb Roeder
Purpose and Effect	The proposed changes update referenced standards, clarify and set timelines for approval requests as aerobic treatment units, clarify Table IV, make code language on access and alarms consistent with referenced standards, allows 25% drainfield size reduction in slightly limited soils for all ATUs, (require property record notice, this aspect was moved out of this issue)
Proposed Rule Change:	19-10--64E-6.012 ATU rule 20191017.docx (See Attached)
Summary:	The proposed changes update referenced standards, clarify and set timelines for approval requests as aerobic treatment units, clarify Table IV, make code language on access and alarms consistent with referenced standards
Possible Financial Impacts:	none
Date New:	7/23/2019
Initially Reviewed by Trap:	9/30/2019
Tabled by Trap:	
Trap Review Finished:	9/30/2019
Variance Committee Reviewed:	11/7/2019
Trap Review Variance Comments:	12/10/2019
Trap Final Decision:	
Final Outcome:	

Comments: 9/30/19 TRAP approved with proviso to work out property record notices and alarms with Roxanne. 10/16 DT discusses with Roxanne, concerns about property record notice. 10/17/19 split out property record notice as separate issue (ER)
11/7/19 Variance Review Board reviewed. Approved by Board with a

comment concerning 45 day response time may be too short. RE 12/2/19

Ready for Rule ☐

In Rule ☐

Rule Date:

Issue 19-10 Aerobic treatment unit updates

- 64E-6.012(1) update edition of referenced standards; specify reporting timelines by certification agencies
- 64E-6.012(2)(a)2 protection of access openings with screws that have special heads (NSF40 language)
- 64E-6.012(2)(c) Making wiring language consistent with NSF40 requirements
- 64E-6.012(2)(e)/Table IV clarify how multiple residences served by one ATU will be sized; add "non-residential" to clarify use of the table for all establishments
- 64E-6.012(2)(h) allow 25% drainfield size reduction for all ATUs
- 64E-6.012(2)(i) clarify approval process for ATUs: ATU installations have to be to code, manufacturer's documents have to show compliance
- 64E-6.012(2)(i) require applicant to respond within certain time frames
- 64E-6.012(2)(j)/(k) clarify interactions between Onsite Sewage Program Office and Manufacturer, no distributor
- 64E-6.012(2)(l) delete old language referring to building occupancy
- 64E-6.012(2)(n) move reporting requirements for maintenance entities from subparagraph on maintenance contract into their own paragraph; requires operating permit as part of the report, requires electronic reporting.
- 64E-6.012(2)(o) renumbering from (n)
- 64E-6.012(3)(d) technical change to update reference

Proposed Rule:

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 must~~shall~~ be installed, operated and maintained in conformance with the following provisions:

(1) Aerobic treatment units designed to treat up to 1500 gallons of sewage waste per day must~~shall~~ be listed by a third party certifying program approved by the State Health Office. Aerobic treatment units must~~shall~~ be in compliance with at least one of the following standards: Class I systems as defined by NSF International Standard/American National Standard (NSF/ANSI) 40-2018~~2013~~, "Residential Wastewater Treatment Systems", ~~revised April 2013~~; nitrogen reduction as defined by NSF/ANSI 245-2018~~2013~~, "Wastewater Treatment Systems – Nitrogen Reduction," ~~revised April 2013~~; onsite residential and commercial graywater treatment systems as defined by NSF/ANSI 350-2017~~2013~~, "Onsite Residential and Commerci~~c~~al 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 must~~shall~~ comply with the following provisions in order for units which it has certified to be approved for use in Florida:

(a) Be accredited by the American National Standards Institute.

(b) Have established procedures which send representatives to distributors in Florida on a recurring basis to conduct evaluations to assure that distributors of certified aerobic units are providing proper maintenance, have sufficient replacement parts available, and are maintaining service records.

(c) Notify the department State Health Office of the results of monitoring visits to

manufacturers and distributors annually, within 60 days of the conclusion of the calendar year ~~monitoring~~. Approved distributors must be reported by the manufacturer to the certifying agency.

(d) Submit completion reports on testing for review by the State Health Office.

(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 NSF/ANSI standard appropriate for the application.

(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) An appropriate mechanism must~~shall~~ be provided to make access ports vandal, tamper, and child resistant as specified by the manufacturer and accepted by the certifying program. ~~Acceptable protection of openings must shall consist of one or more of the following methods as specified by the tank manufacturer:~~

~~1. A padlock.~~

~~2. A cover that can be removed only with specialized tools. This shall include covers fastened using special screws.~~An "O" ~~ring with twist lock cover requiring special tools for removal~~

~~3. Covers weighing 65 pounds or more, net weight.~~

~~4. A hinge and hasp mechanism which uses stainless steel or other corrosion resistant fasteners to fasten the hinge and hasp to the lid and tank for fiberglass, metal, or plastic lids.~~

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

(c) A visual and audio warning device must~~shall~~ be installed in a conspicuous location so that activation of such warning device will alert property occupants of aerobic unit malfunction or failure. The visual and auditory signals must continue to be functional in the event of an electrical, mechanical, or hydraulic malfunction of the system provided power is available to the system and must resume once power is restarted following the power outage. This does not mandate a battery back-up for the alarm system.~~All warning devices shall be wired separately from the aerobic unit so that disconnecting the aerobic unit from electricity will activate the warning device.~~ If installed outside, the alarm must~~shall~~ be waterproof.

(d) Each unit must~~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.

(e) Minimum required treatment capacities for systems serving any structure, building or group of buildings must~~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 Gallons Per Day
1 or 2	Up to 1200	400
3	1201-2250	400
4	2251-3300	500

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

~~COMMERCIAL~~ NON-RESIDENTIAL:

Estimated Sewage Flow in Gallons Per Day	Minimum Required Treatment Capacity in Gallons Per Day
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. Where the number of bedrooms and the corresponding building area in Table IV do not coincide, the criteria which results in the greatest required treatment capacity will~~shall~~ apply. For each additional bedroom or each additional 750 square feet of building area, or fraction thereof in a dwelling unit, treatment capacity must be increased by 60 gallons. For aerobic treatment units treating sewage from more than one dwelling unit or from residential establishments sized as other per occupant, the minimum required treatment capacity must be 100 gallons greater than the combined estimated sewage flow calculated by adding up the estimated sewage flows from each dwelling unit from Table I.

2. These figures assume that the aerobic system will be treating domestic strength sewage with $CBOD_5$ and suspended solids values typically not exceeding 300 and 200 milligrams per liter, respectively. For wastewaters with higher $CBOD_5$, higher suspended solids values, or for facilities that exhibit short-term hydraulic surge conditions, additional treatment or pre-treatment facilities will~~shall~~ be required when specified by design engineers, plant manufacturers, or by the DOH county health department.

(f) There must~~shall~~ be no bypass capability designed into the system which will allow waste to be discharged to the drainfield without undergoing all the treatment processes necessary to achieve the desired effluent quality. Bypassing, removing, or excluding any component or components of a system after the system has received final installation approval is prohibited.

(g) Effluent from an aerobic treatment unit must~~shall~~ be disposed of on the owner's property in conformance with other requirements of this chapter ~~except as provided for in paragraph (f) above~~. Effluent quality which is found to not meet appropriate average treatment standards as provided by their certification must~~shall~~ be reported to the maintenance entity for correction within 10 working days.

(h) Where slightly limited soil textures exist on a site, the required drainfield size may be

reduced by 25 percent from the requirements in Rule 64E-6.008(5) or Rule 64E-6.009(3)(d), F.A.C. This shall apply to all aerobic treatment units permitted under Rule 64E-6.012.

(i) To apply for approval of aerobic treatment unit models, ~~A~~a manufacturer, distributor or seller of aerobic treatment units must~~shall~~ furnish, to the Onsite Sewage Program~~State Health~~ Office~~, in Microsoft Word document format, Portable Document Format (PDF) or other electronic format accepted by the Department,~~ a written request for approval, a copy of the completion reports, owner manual, part list, and engineering drawings showing the design and construction details of all models of approved ~~Class I~~ aerobic treatment units to be constructed or installed under the provisions of this rule in Portable Document Format (PDF) or other electronic format accepted by the Department. The documentation submitted must demonstrate for each unit model that the installation and operation complies with all provisions of this chapter, and specify the approved treatment receptacle. The applicant must respond to requests for additional information about their application for aerobic treatment unit approval from the Onsite Sewage Program Office within 45 calendar days after receipt of a request for additional information. The Onsite Sewage Program~~State Health~~ Office will forward ~~these~~ completion reports and drawings to each DOH county health department. No aerobic unit will~~shall~~ receive final installation approval until the unit is found to be in compliance with all provisions of this rule, including compliance with design and construction details shown on the engineering plans filed with DOH county health departments and the Onsite Sewage Program~~State Health~~ Office.

(j) Manufacturers must~~shall~~ provide to the Onsite Sewage Program Office a listing of approved maintenance entities they have authorized to provide service in the state and must~~shall~~ demonstrate that the entire state is covered by at least one maintenance entity. A system using a manufacturer's unit will~~shall~~ not be approved in the state if the manufacturer cannot demonstrate that there are maintenance entities to service it.

(k) A manufacturer~~distributor~~ of a specific ~~manufacturer's~~ brand or model of an approved aerobic treatment unit must~~shall~~ provide to the DOH county health department and Onsite Sewage Program~~State Health~~ Office written assurance that spare mechanical and structural parts, as well as the mechanisms used to make the access ports vandal, tamper, and child resistant, are available, upon request, for purchase, to all ~~other~~ approved maintenance entities.

(l) ~~Where local building occupancy codes require that the DOH county health department approve the means of sewage disposal prior to building occupancy or change of occupancy, and w~~Where an aerobic treatment unit is used~~utilized~~, a current, unexpired aerobic treatment unit maintenance contract between the property owner or lessee and an approved maintenance entity must~~shall~~ be one of the required conditions of system approval.

(m) A copy of the signed maintenance agreement between the property owner or property lessee and an approved maintenance entity must~~shall~~ be provided to the DOH county health department by the maintenance entity. The maintenance agreement must~~shall~~:

1. Initially be for a period of at least 2 years and subsequent maintenance agreement renewals must~~shall~~ be for at least 1 year periods for the life of the system.

2. Provide that a maintenance entity which desires to discontinue the provision of maintenance services, notify in writing, the property owners and lessees and the DOH county health department at least 30 days prior to discontinuance of service.

3. Provide that, if a private maintenance entity discontinues business, property owners who have previously contracted with the discontinued maintenance service must~~shall~~, within 30 days of the service termination date, contract with an approved maintenance service and provide the DOH county health department a copy of the newly signed maintenance agreement.

4. Provide that each aerobic unit is inspected by an approved maintenance entity at least two times each year. Aerobic treatment units serving commercial establishments must~~shall~~ be inspected four times per year.

(n) The maintenance entity must~~shall~~ furnish to the DOH county health department a report~~listing~~ of all aerobic treatment units inspected or serviced during the respective reporting

Commented [ERL1]: Variance Member Maurice Barker: Commented the 45 day response time still may be too short but reasonable.

Commented [ERL2R1]: Leaving at 45 calendar days to make it consistent with language in Issue 19-08 added calendar.

period. As a minimum, reports mustshall indicate the operating permit, 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 mustshall also include a list of the owners who have refused to renew their maintenance agreement.

(no) The DOH county health department willshall, at least annually, inspect the maintenance and performance of aerobic treatment units. The DOH county health department willshall also inspect each authorized maintenance entity, including review of their service records and maintenance agreements.

(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., mustshall be designed and certified by an engineer licensed in the State of Florida. The design mustshall include an assessment of wastewater strength. The certification mustshall state that the unit is capable of consistently meeting, at minimum, secondary treatment standards for $CBOD_5$ and TSS established in Rule 64E-6.025(12)(a), F.A.C. In addition, the following requirements mustshall also be met:

(a) The owner or lessee of a system mustshall comply with the applicable safety, maintenance and operational requirements of subsection (2) above. Unless the system owner or lessee is a state licensed wastewater treatment plant operator, the owner or lessee isshall 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, F.A.C.

(b) A permitted aerobic unit maintenance entity mustshall collect effluent quality samples and submit the sample analysis reports to the DOH county health department. Effluent quality samples for $CBOD_5$ and suspended solids mustshall be collected at least semi-annually and such samples mustshall be analyzed by a department-approved laboratory.

(c) Written sample analysis reports mustshall 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 $CBOD_5$ or suspended solids exceeds secondary treatment standards by more than 100 percent, the maintenance entity or certified operator mustshall notify the DOH county health department by telephone or in person within 24 hours after receipt of sample analysis results.

(d) The DOH county health department mustshall monitor the maintenance and performance of aerobic treatment units as required by paragraph (om) above.

(4) No aerobic treatment unit mustshall be serviced or repaired by a person or entity engaged in an aerobic treatment unit maintenance service until the service entity has obtained an annual written permit issued on Form DH 4013 from the DOH county health department in the county where the service company is located. Each service entity mustshall employ at least one plumbing contractor licensed under Section 489.105(3)(m), F.S., septic tank contractor registered under Part III of Chapter 489, F.S., or a state-licensed wastewater treatment plant operator, who is responsible for maintenance and repair of all systems under contract. Application for a Maintenance Service Permit, Form DH 4066, 02/10, herein incorporated by reference, mustshall be made to the DOH county health department and mustshall contain the following information:

(a) Evidence that the maintenance entity possesses a manufacturer's maintenance and operations manual and has received training from the manufacturer in proper installation and service of the unit and has received written approval from the manufacturer to perform service on their units. The manual mustshall contain detailed instructions on proper operation and maintenance procedures, a replacement parts list for all models being installed and maintained, a statement giving the capabilities of each unit, instructions on how to detect a malfunctioning unit and what to expect from a properly functioning unit.

(b) A signed statement from the applicant attesting that the applicant has adequate staff,

possesses proper equipment and has sufficient spare structural and mechanical parts and components to perform routine system monitoring and servicing and is able to make a service response within 36 hours after notification of the need for emergency repairs.

(c) Payment of $25.00 to the DOH county health department per annum for the aerobic treatment unit maintenance service permit.

(5) Emergency service necessary to prevent or eliminate an imminent sanitary nuisance condition caused by failure of a mechanical component of any aerobic treatment unit must~~shall~~ be reported by the approved aerobic unit maintenance entity, in writing, to the DOH county health department no later than 5 working days after the date of the emergency service.

(6) All materials incorporated herein may be obtained from the Bureau of Onsite Sewage Programs at www.MyFloridaEH.com or 4052 Bald Cypress Way, Bin A08, Tallahassee, Florida 32399-1713.

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, 7-31-18.

19-12 ISSUE FOR TECHNICAL REVIEW AND ADVISORY PANEL CONSIDERATION

Printed 12/5/2019 2:35:10 PM

Next Trap Meeting: 12/10/2019

Subject: Performance-Based Systems-Standards

Rule Sections: 64E-6.025

Issue:	Replaces current 7-day and 30-day average discharge limits with a percent removal.
Issue Originated By:	Eb Roeder
Purpose and Effect	The proposed changes replace current 7-day and 30-day average discharge limits with a percent removal., summarizes the performance requirements into a table format
Proposed Rule Change:	19-12--64E-6.025-PBTS_revised_standards_language only0925.doc (See Attached)
Summary:	Rewrites the definition and standards for Performance Based Treatment Systems •This proposal resurrects the previously TRAP-approved issue 07-23, which had not been adopted into rule so far. Since then, the 2013 legislature (HB375/7019, CH 2013-79/213) established a Florida Keys nitrogen reduction standard of 70% as alternative to 10 mg/L. This proposal includes that, and reformatted Table IX to fit in portrait orientation. •The proposal replaces treatment standards for 7-day and 30-day averages with a percent removal performance standard. 7-day and 30-day averages are not meaningful in current practice. Percent removal allows some consideration of variability in influent concentrations. •The standards are reformatted in a table for ease of reading. •Baseline standards are provided for all pollutants. Domestic sewage strength and septic tank effluent standards are now consistent with 64E-6.002(15)(c) (domestic sewage strength). •ATU standards are defined to clarify PBTS standards in locations where ATUs are required. •Florida Keys standards are amended by grab sample and percent removal standards •Advanced secondary treatment grab sample standards for nitrogen is loosened to make a distinction from Florida Keys standard. •Effluent is defined and treatment standards are adjusted for soil-based treatment. •Disposal and treatment component are defined

Possible Financial Impacts:	should not be any for systems that meet the existing standards.
Date New:	8/20/2019
Initially Reviewed by Trap:	8/27/2019
Tabled by Trap:	
Trap Review Finished:	8/27/2019
Variance Committee Reviewed:	11/7/2019
Trap Review Variance Comments:	12/10/2019
Trap Final Decision:	
Final Outcome:	

Comments:

Formerly 07-23
12/2/2010 TRAP Approved for Rule
5/21/12 Not included in 2012 rule package.
8/20/19 Renumbered 19-12
Heard by TRAP on 8/27/19 and passed with some edits by the panel. Ready for variance committee. Meeting must be ratified at 9/30/19 meeting due to issue with FAR advertisement. RE RE 8/29/19
9/30/19 TRAP meeting ratified the 8/27/19 meeting. RE
11/7/19 Reviewed by Variance Board. Requested adding NSF 245 & INRB to chart. RE 12/2/19

Ready for Rule	☐
In Rule	☐
Rule Date:	

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 $CBOD_5$, 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.

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

(9) 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 $CBOD_5$ (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.

(10) Performance-based treatment system maintenance entity - any person or business entity which has obtained an annual written permit issued on form DH4013 from the DOH county health department in the county where the maintenance entity is located~~ and has been authorized to perform maintenance 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 that performance-based treatment system.~~

(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 ($CBOD_5$), 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 achieve compliance the values determined from samples of the system shall be equal to or better than the treatment standards listed. For concentrations, better means lower, for percent removal, better means higher.

(15) Wastewater strength - the sum of the $CBOD_5$ and TSS concentrations.

TABLE IX

PERFORMANCE STANDARDS

POLLUTANT	Domestic Sewage Waste Range	Baseline Septic Tank Effluent Standards	Baseline Treatment Standard 24" below bottom infiltrative surface	~~Aerobic Treatment Unit Effluent Standards~~	Secondary Treatment Effluent Standards	Advanced Secondary Treatment Effluent Standards	Florida Keys Nutrient Reduction Effluent Standards	Advanced Wastewater Treatment Effluent Standards
$CBOD_5$ (mg/L)								
-annual average	300	150	10	~~20~~	20	10	10	5
-individual sample	500	300	20	~~60~~	60	30	30	10
-removal	NA*	NA	95%	~~90%~~	90%	95%	95%	97%
TSS (mg/L)								
-annual average	200	100	30	~~20~~	20	10	10	5
-individual sample	500	200	100	~~60~~	60	30	30	10
-removal	NA	NA	85%	~~90%~~	90%	95%	95%	97%
TN (mg/L)								
-annual average	100	100	70	~~NR**~~	NR**	20	10	3
-individual sample	150	150	100			50	40	6
-removal	NA	NA	30%			50%	7062%	90%
TP (mg/L)								
-annual average	18	18	12	~~NR~~	NR	10	1	1
-individual sample	25	25	18			20	4	2
-removal	NA	NA	30%			25%	50%	90%
Fecal coliform (cfu/100ml)								
-annual average	2.0E+6	2.0E+6	20	~~NR~~	200	200	NR	1
-individual sample	2.0E+7	2.0E+7	200		800	800		25
-percent reduction	NA	NA	99.999%		99.99%	99.99%	NR	99.9999%

* NA = Not applicable

** NR = No requirement

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.

Footnote 3. Performance-based treatment systems (PBTS) may be permitted where Aerobic Treatment Units (ATU) are required, for example by county or city ordinance. When a PBTS is designed where an ATU is required, the following performance standards apply: baseline septic tank effluent standards and secondary treatment effluent standards for $CBOD_5$ and TSS only (NSF 40); baseline septic tank effluent standards, secondary treatment effluent standards for $CBOD_5$ and TSS, advanced secondary treatment effluent standards for TN (NSF 245); baseline septic tank effluent standards, advanced secondary treatment effluent standards for $CBOD_5$ and TSS, advanced wastewater treatment standards for fecal coliform (NSF 350). An ATU not installed as a PBTS must comply with Rule 64E-6.012, F.A.C.

Footnote 4. Where a PBTS is designed to include soil as a treatment component, in lieu of an in-ground nitrogen reducing biofilter as specified in Rule 64E-6.009(7), F.A.C., the following effluent standards apply: baseline treatment standard 24" below bottom infiltrative surface and advanced secondary treatment effluent standards with soil component for TN (10 mg/L average, 25 mg/L grab sample, 75% removal).

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, .

Commented [ERL1]: Variance Member Roxanne Groover: Commented, please add NSF 245 & INRB to chart.

OSP response:

Addressed various aerobic treatment unit standards in footnote 3. An engineer specifying 50% nitrogen reduction would specify baseline plus ASTS for total nitrogen

Addressed INRB-likes with footnote 4. Standards are for advanced secondary with soil component treatment.
The INRB is not permitted as a PBTS, the performance level is specified in edits to 64E-6.009(7) that have recently been approved by TRAP.

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

~~(a) $CBOD_5$ and TSS~~

~~1. The arithmetic mean of the $CBOD_5$ 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 $CBOD_5$ 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 $CBOD_5$ 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 $CBOD_5$ 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) $CBOD_5$ and TSS~~

~~1. The arithmetic mean of the $CBOD_5$ 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 $CBOD_5$ 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 $CBOD_5$ 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 $CBOD_5$ 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. $CBOD_5$ - <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. $CBOD_5$ - <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 ($CBOD_5$) 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 $CBOD_5$ (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) $CBOD_5$ and TSS~~

~~1. The arithmetic mean of the $CBOD_5$ 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 $CBOD_5$ 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 $CBOD_5$ 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 $CBOD_5$ 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 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 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 $CBOD_5$ and TSS concentrations in the effluent.~~