TECHNICAL REVIEW AND ADVISORY PANEL (TRAP) MEETING

DATE: Friday, April 21, 2017
TIME: 3:00 p.m. Eastern Time
PLACE: Conference call meeting
       Teleconference Phone Number: 888-670-3525
       At the prompt, enter the
       Participant Code: 552 583 4898 #

THIS MEETING IS OPEN TO THE PUBLIC.

Agenda

1. Introductions
2. Review minutes of March 31, 2017 meeting
3. Old Business
   16-03 NSF 245 Nitrogen reducing ATU's
4. New Business
5. Other items of interest to the Technical Review and Advisory Panel
6. Public Comment
TECHNICAL REVIEW AND ADVISORY PANEL (TRAP) MEETING MINUTES

DATE: Friday, March 31, 2017
PLACE: Conference Call

Members present were:
Roy Pence, Home Building Industry, Vice Chair
Julie Bortles, Local Government
Glenn Bryant, County Health Department
Sonia Cruz, Environmental Health
Ron Davenport, Septic Tank Manufacturer

Scott Johnson, Florida Engineering Society
Russ Melling, Consumer Representative
Pamela Tucker, Real Estate Professional

Alternate members present:
Mary Howard, Environmental Health
Dewayne Bingham, Jr., Septic Tank Industry
Robert Baker, Septic Tank Manufacturer

Johanna Whelan, DOH-CHD

Department of Health staff present:
Ed Barranco, Environmental Administrator
Dale Holcomb, Environmental Administrator
Eberhard Roeder, Engineer
David Hammonds, Env. Consultant
Ed Williams, Environmental Consultant
Elke Ursin, Environmental Manager
Gao, Xueqing, Environmental Consultant

Absent members and alternates:
Vic Godlewski, Local Government
Oren Reedy, Soil Scientist
Joseph Sullivan, Soil Scientist
Mark Tumeo, Professional Engineer
Robert Washam, Consumer
Martin Guffey, Septic Tank Industry
Ken Odom, Home Building Industry, Chair
Scott Franz, Soil Scientist

Others present:
Roxanne Groover, Florida Onsite Wastewater Association
Damann Anderson, Hazen and Sawyer
Laura Kramer, DOH-Volusia
Mark Fricke, Presby Environmental

Lee Rashkin, Presby Environmental
Rick Hicks, DEP
Dominique Buhot, Greens Env. Services
Greg Mayfield, Septic Tank Industry
1. **INTRODUCTIONS**

Vice Chairman Pence called the meeting to order at 1:30 p.m. and invited the members and Department staff present to introduce themselves. Nine member-represented groups were present, representing a quorum.

2. **REVIEW MINUTES OF LAST MEETING**

The TRAP reviewed the minutes of the December 9, 2016 meeting.

MOTION by Ron Davenport and seconded by Scott Johnson, for the TRAP to approve the minutes from the December 9, 2016 meeting. PASSED unanimously.

3. **OLD BUSINESS**

**Issue 15-02 Nitrogen-Reducing Media Lined Drainfields**

Dale Holcomb introduced the issue. The changes from the last meeting were incorporated and brought to the Variance Review and Advisory Committee for comments. Damann Anderson suggested the TRAP go over the proposed language before hearing the comments from the Variance Review and Advisory Committee.

The TRAP discussed the issue with the following results:

Line 20: Russ Melling was concerned regarding the language “and provided the results are encouraging” and whether JAPC would allow something that vague to go forward. Based on later language in the section, Scott Johnson suggested replacing the language with “and meet the standards of this section”.

Lines 22-26: Discussion regarding lift dosing vs. low pressure dosing; cost, equal distribution, and nitrification. The lift dosing language was struck and (a)1. was changed to state “The system drainfield shall be low-pressure dosed unless the designer chooses another method that is demonstrated to provide adequate nitrification”.

There were additional questions/discussion regarding language. Those questions were answered and resulted in no changes. The questions included clarification of the location of the nitrification performance boundary (bottom of the 18 inches of unsaturated soil beneath the drainfield at the top of the media), sampling language (only required during the pilot project), setback distances, and observation ports.

Line 94-98: It was decided to move paragraph 19. to variant two at line 150 between 2.d. and 2.e.

Line 111: Replace “used” with “installed”.

Line 125: Replace “shall be a minimum” to “shall be at least” on this line and throughout document to be consistent.
Roy Pence questioned the 6 inches of unsaturated slightly-limited soil shown below the media above the seasonal high water table in several of the system diagrams. It was discussed and Scott Johnson suggested that it was a good cushion. No language change was made.

Line 159: Include language “and at least 12 inches past the perimeter of the layer in 3.a.”.

Line 191: Change “a minimum of” to “at least”.

Line 205: Change “or pH” to “and pH”.

Line 242: Change “to modify the system” to “to be modified”.

Line 246: Replace “equal distribution throughout the drainfield” to “adequate nitrification is achieved”. Provides engineers the flexibility to design.

Line 258: This language partially duplicates an engineer’s certification on line 85 and 86. On line 86, strike the words “and a written certification to the department that the entire installation meets” and insert “meet”.

Lines 253 and 254: Discussion regarding necessity and value of observation ports in gravity-fed drainfields. No language change.

Discussion of system modification techniques for liner systems.

Discussion of property owner notification.

More discussion of lines 252-254 regarding placement of the observation ports in various products that might not contain “drainfield lines” and the possibility that the variance procedure could be used for systems types that do not necessarily have the physical structures found in the standard drainfield design. No language changes made.

Engineer Representative - Jim Shivinski: Can we do away with the six inches between the media and the seasonal high water table? Language will be kept for bacteria removal, virus attenuation, and constructing the media layer when the soil immediately below it is in a saturated condition.

CHD Representative - Eric Maday: What soil layer is the drainfield to be sized on? Size is based on the texture of the soil in the nitrification layer between the drainfield and the denitrification media. How will this apply to a repair? Repairs using the media and liner would require 18 inches of separation in the current proposal. If someone was in a repair scenario where the non-denitrification rule would allow a 6 inch or 12 inch separation, the applicant might use an ATU for nitrification and then 6 or 12 inches between the drainfield and the denitrification media layer. Who determines if the media meets the code? It would be the designer as the media will already be buried when the Department makes its inspection. What are the specifications for the underdrain in variance two? There are none except what are written. The designer would design it.
DEP Representative - Maurice Barker: Wouldn’t it be better to put the design specifications in a guide and incorporate the guide by reference rather than add all this language to the rule itself? Perhaps that will happen in the rule-reduction but at the moment we will go forward with this proposal to amend the rule.

Will Bryant made a MOTION approve 15-02 incorporating the recommended changes. Seconded by Scott Johnson
PASSED Unanimously

**Issue 16-03  NSF 245 Nitrogen Reducing ATU’s**

There was some discussion regarding this issue. ATU sizing and recirculation rates were discussed.

Scott Johnson made a MOTION to table the issue until next meeting.
Seconded by Russ Melling
PASSED Unanimously

4. **NEW BUSINESS**

NONE

5. **OTHER ITEMS OF INTEREST TO THE TRAP**

NONE

6. **PUBLIC COMMENT**

NONE

Pamela Tucker made a MOTION to Adjourn
Seconded by Sonia Cruz
PASSED Unanimously

Discussion regarding next TRAP Committee meeting. Dale Holcomb plans to advertise and have the meeting on April 21 via conference call.

Meeting Adjourned at 4:15 PM
Subject: NSF 245 Nitrogen reducing ATU's
Rule Sections: 64E-6.012

Issue: NSF has an approval protocol for Nitroden-reducing ATU's that is not incorporated into our rule. Also, our existing NDF references are out of date. The sizing of ATU's has been out-of-sync with the system flows for years requiring ATU's that are sized larger than the actual flows.

Issue Originated By: Eberhard Reoder, DOH

Purpose and Effect: The proposed changes incorporate NSF 245 into the rule and updates the references to the NSF standards that ATU's are required to meet. Also a disparity in sizing ATU's is addressed to allow ATU's that are rated for the anticipated flow.

Proposed Rule Change: 16-03-64E-6.012 ATU References, Standard 245 and ATU Sizing.docx (See Attached)

Summary: The proposed changes will update the references to the ATU Standards, incorporate NSF 245 References.

Possible Financial Impacts: None
Date New: 11/10/2016
Initially Reviewed by Trap: 12/9/2016
Tabled by Trap:  
Trap Review Finished: 12/9/2016
Variance Committee Reviewed: 3/2/2017
Trap Review Variance Comments:  
Trap Final Decision:  
Final Outcome:
Comments: 12/9/2016 Approved to go to Variance Committee. TRAP wants to see more information on sizing issue when it returns.
3/2/2017 Presented issue to Variance committee and received comments: REI, DOH - OK; STI - Agree; CHD- Support with no comments; ENG, DEP - No comment

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

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

(1) Aerobic treatment units systems designed to treat up to 1500 gallons of sewage waste-per day shall be listed by a third party certifying program approved by the State Health Office. Aerobic treatment units shall be in compliance with at least one of the following standards: for Class I systems as defined by ANSI/NSF International Standard Number 40, revised April 2013, July 2008, herein incorporated by reference; nitrogen reduction as defined by ANSI/NSF International Standard Number 245, revised April 2013, herein incorporated by reference; or onsite residential and commercial water reuse treatment systems as defined by ANSI/NSF International Standard Number 350, revised December 2012, herein incorporated by reference. An approved third party certifying program shall comply with the following provisions in order for units which it has certified to be approved for use in Florida:

(a) 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 within 60 days of the conclusion of the 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 ANSI/NSF Standard 40.

(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 shall be provided to make access ports vandal, tamper, and child resistant. Acceptable protection of openings shall consist of one or more of the following methods as specified by the tank manufacturer:
   1. A padlock.
   2. 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 tank outlet and the drainfield.

(c) A visual and audio warning device shall be installed in a conspicuous location so that activation of such warning device will alert property occupants of aerobic unit malfunction or failure. 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 shall be waterproof.

(d) Each unit shall be designed or equipped so that regardless of unusual patterns or frequencies of sewage flow into the system effluent discharged to the drainfield will be in compliance with the applicable standards of 64E-6.012(1)Class I effluent quality standards as defined by ANSI/NSF Standard 40.

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

<table>
<thead>
<tr>
<th>RESIDENTIAL:</th>
<th>Building Area in square feet</th>
<th>Minimum Required Treatment Capacity gallons per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Bedrooms</td>
<td>Up to 1200</td>
<td>400</td>
</tr>
<tr>
<td>1 or 2</td>
<td>1201-2250</td>
<td>500</td>
</tr>
<tr>
<td>3</td>
<td>2251-3300</td>
<td>600</td>
</tr>
</tbody>
</table>

For each additional bedroom or each additional 750 square feet of building area, or fraction thereof, treatment capacity shall be increased by 604 gallons.

<table>
<thead>
<tr>
<th>COMMERCIAL:</th>
<th>Estimated Sewage Flow in gallons per day</th>
<th>Minimum Required Treatment Capacity in gallons per day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-400</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td>401-500</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>501-600</td>
<td>600</td>
</tr>
<tr>
<td></td>
<td>601-700</td>
<td>700</td>
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<tr>
<td></td>
<td>701-750</td>
<td>750</td>
</tr>
<tr>
<td></td>
<td>751-800</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td>801-1000</td>
<td>1000</td>
</tr>
<tr>
<td></td>
<td>1001-1200</td>
<td>1200</td>
</tr>
<tr>
<td></td>
<td>1201-1500</td>
<td>1500</td>
</tr>
</tbody>
</table>

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 shall apply.

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

(f) There 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. For units discharging into alternative systems according to 64E-6.009(5), the designing engineer may specify recirculation up to 50% of the disposal rate.

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

(h) Units meeting Class I Standards as specified by ANSI/NSF Standard 40 shall receive consideration, via the variance review process, for use where daily domestic sewage flow limitations of Rule 64E-6.005, F.A.C., are exceeded or where a high level of sewage treatment is warranted. Also, for Class I units.

1. Where slightly limited soil textures exist on a site, the required drainfield size may be reduced by 25 percent from the requirements in subsection 64E-6.008(5) or paragraph 64E-6.009(3)(d), F.A.C.

(i) A manufacturer, distributor or seller of aerobic treatment units shall furnish, to the State Health Office, in Microsoft Word document format, Portable Document Format (PDF) or other electronic format accepted by the Department, a copy of the completion reports and engineering drawings showing the design and construction details of all models of approved Class I units to be constructed or installed under the provisions of this rule. The State Health Office will forward these reports and drawings to each DOH county health department. No aerobic unit 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 State Health Office.

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

(k) A distributor of a specific manufacturer's brand or model of an approved aerobic treatment unit shall provide to the DOH county health department and State Health Office written assurance that spare mechanical and structural parts 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 where an aerobic treatment unit is utilized, a current, unexpired aerobic treatment unit maintenance contract between the property owner or lessee and an approved maintenance entity 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 shall be provided to the DOH county health department by the maintenance entity. The maintenance agreement shall:

1. Initially be for a period of at least 2 years and subsequent maintenance agreement renewals 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 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 shall be inspected four times per year. The maintenance entity shall furnish to the DOH county health department a listing of all aerobic units inspected or serviced during the respective reporting period. As a minimum, reports shall indicate the system owner or building lessee, the street address of the system, the date of system inspection or service and a statement as to the maintenance or service performed. The maintenance entity shall also include a list of the owners who have refused to renew their maintenance agreement.

(n) The DOH county health department shall, at least annually, inspect the maintenance and performance of aerobic treatment units. The DOH county health department shall 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 64E-6.004(4)(a) or (b), F.A.C., shall be designed and certified by an engineer licensed in the State of Florida. The design shall include an assessment of wastewater strength. The certification shall state that the unit is capable of consistently meeting, at minimum, secondary treatment standards for CBOD₅ and TSS established by DEP in Rule 64E-6.025(12)(a)62-600.420, F.A.C. In addition, the following requirements shall also be met:

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

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

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

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

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

(4) No aerobic treatment unit shall 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 shall 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, shall be made to the DOH county health department and shall 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 shall 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 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 Ongoing Sewage Programs at www.MyFloridaEH.com or 4052 Bald Cypress Way, Bin A08, Tallahassee, Florida 32399-1713.

Rulemaking Authority 381.0065(3)(a), 489.533(3) FS. Law Implemented 381.0065, 489.533(3) 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_____.
Variance Committee Comments for TRAP Issue:
16-03 (NSF 245 Nitrogen-Reducing ATU’s)

REI – OK
DOH – OK
STI – Agree
CHD - Support with no comments
Supporting Information to part of TRAP Issue 16-03
Results of the ATU-Sizing Survey as of 4/13/17

Sent out by e-mail 3/23/2017 to 19 representatives of manufacturers. Received one response.  
Sent out reminder 3/29/2017 to remaining representatives.  
Total responses by 11:40 am 3/31/17: seven  
Sent out reminder 4/3/2017 to remaining representatives.  
Total responses by 4:45 pm 4/13/2017: eleven  
Copies of the comments are provided below the results table. Responses eight through eleven have been received since the TRAP conference call of March 31 and are in italics.

Table of survey results

<table>
<thead>
<tr>
<th>Option</th>
<th>Summary</th>
<th>Number or Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Increase minimum required treatment capacity compared to current requirements (make systems larger for a given residence)</td>
<td>1</td>
</tr>
<tr>
<td>B</td>
<td>Keep current sizing (minimum treatment capacity requirement is residential estimated sewage flow +200 gpd)</td>
<td>1+1 (modified to+100 gpd)</td>
</tr>
<tr>
<td>C</td>
<td>Go with the proposed sizing (minimum treatment capacity is residential estimated sewage flow +100 gpd, making some systems smaller)</td>
<td>7.5*</td>
</tr>
<tr>
<td>D</td>
<td>Further reduce sizing to estimated sewage flow (minimum treatment capacity is residential estimated sewage flow, making systems smaller)</td>
<td>0.5*</td>
</tr>
</tbody>
</table>

(* split one unspecific vote based on comments that current sizing results in too large systems)

1. Comments
   Response 1 c
   My recommendation is for #3. My reasoning is that an ATU must treat both the hydraulic and the organic loading to be successful. The use of water saving fixtures (e.g. low volume toilets) reduces the hydraulic flow, but the organic load remains unchanged. However, the 2013 changes in the sizing of systems over 4 bedrooms for conventional systems, which must also treat both loadings, creates an unjustified barrier to using ATUs on larger homes, where I feel they could do a better job of controlling eutrophication than conventional systems in most cases.
   On a related note, with the changes already made in table I, one acre of land served by public water (2500 gallons of estimated sewage flow) can now support 2 eight bedroom home lots and 2 seven bedroom home lots. My point? The Department has an obligation to critically think proposals all the way through before they adopt them.

   Response 2 c
   Sorry for the late response. We at … would chose option “C” proposed sizing. Our system in particular would accommodate the new regulation perfectly and actually make the system perform better. In most states because of the increased size our system is under fed. Meaning that there is not enough in a 4 br home to sustain the system because there may only be two persons living there. However, what happens when 4 move in or 6? Nothing negative! Our system is so robust that is adjusts to higher flow to allow for the concentration of waste.
Response 3 (c or d)?
The methods used to size the systems in FL are something I have never agreed with. Aerobic digestion is a biological action requiring more than just sizing as a factor for maximum efficiency. When a system is over sized, as most are in FL, the balance of the factors involved is thrown off and you do not get the quality of effluent the system is capable of producing.
ATU's function best at the upper end of their rated capacity's not the lower end. So reducing the sizing per household to what the national average is will produce a better effluent in a greater majority of installations than what you have now.
Last but by no means least. Some Mfg's agree with the larger sizes for different reasons and the fact that we make more money on the larger ones is a reason. This issue is not about economics but environmental.
Also on this issue BIGGER IS NOT BETTER,

Response 4 c (no comment)

Response 5 c
Onsite system components are traditionally sized according to peak daily flow rate that may really occur only few days within a year (ex: Christmas period). The fact that most of the regulations are prescriptive rather than performance based motivate such an approach in order to provide additional safety factors to take into account many uncontrolled conditions, such as:

- The performance of conventional septic tank and soil based system have never been evaluated over a rigorous third party protocol as applied in standards;
- Soil and Sand used in sand filter beds varies a lot from one site to another and quality control is very difficult to apply for onsite individual systems, and
- Soil evaluation to design a drain field is imprecise according to the high heterogeneity of soil on a same site (vertical and horizontal variations), etc.

On the other hand proprietary/manufactured wastewater treatment technologies must be tested according to rigorous third party protocol and different stress test conditions to certify their performance and certification program includes quality control of the manufactured systems (all main components such as tank, filtering media, blower, etc.) as well as annual audit. These treatment units when tested receive the peak design flow every day.
Considering the previous elements, it appears logical that application of additional safety factors is not required and testing/sizing of these certified technologies should be done using the average flow rate (or a lesser safety factor applied on the average flow), since the certification process and adequate classification of technologies conjugated to manufacturing and process control required to maintain the certification reduce significantly the risk related to the use to these technologies.
To the contrary, it would make sense to provide additional safety factors by using the peak daily flow rate for design purpose, for all other components of the treatment train, such as septic tanks, conventional soil based leaching beds, sand filter and final disposal leaching beds, which are prescriptive and are not subject to any performance certification and classification.
Thus, we propose to go with the option C below, as long as those apply only to Advanced Treatment Units and not to conventional systems or soil based systems.

Response 6 a
Okay, from a big picture perspective, we don’t believe these are the right questions in order to ensure optimum treatment.
But if we are limited to one choice, it would be A.

Response 7 b (modified to+100 gpd)
... is not in favor of reducing the sizing of the plants – with nitrogen being an important consideration in Florida making them smaller would only make it more difficult for the treatment plants to reduce the nitrogen level, so we are against the rule change. We would recommend b – but only a 100 gpd for each additional bedroom or additional 750 square feet.

b) Keep current sizing (minimum treatment capacity requirement is residential estimated sewage flow +100 gpd)
follow-up:
What we are saying to keep the flow currently in the rules and only increase by 100 gallon per extra bedroom – we were a little confused also.
Yes on your second question for same reason – nitrogen – septic is different

Response 8  b
I would recommend the State continue using the current sizing. We feel that decreasing the flow rate would exacerbate a number of issues faced in the State.

Response 9 c
My vote would be for “C”. Water saving fixtures and people having a better understanding of water conservation measures is resulting in an overall reduction in the average daily flow. Option C brings the Florida design flows to a level that better reflect the ½ to 1 times the daily flow for the settling tank.

Response 10 c
I would prefer option c) Go with the proposed sizing (minimum treatment capacity is residential estimated sewage flow +100 gpd, making some systems smaller)
Please see attached for comments. Thank you for the opportunity to comment on the proposed rule changes.
(Note, E. Roeder: attached comments commented on sampling requirements and proposed to require sampling by a third-party DOH-approved lab instead of the maintenance entity).

Response 11 c
Your proposal looks good and will bring your loading more in line with what we see in other states. This will also allow ATU loading to better agree with the loading you have for septic tanks and PBTS Systems.
... is in support of this change.
2. Survey email

Dear ATU-manufacturer,

We ask for your feedback on a rule change proposal currently under consideration by the Florida Department of Health’s Technical Review and Advisory Panel (TRAP). The proposal would reduce the minimum treatment capacity required for installations of residential aerobic treatment units certified to NSF/ANSI Standard 40. Shown at the bottom of this e-mail is the proposed language in strike/add format.

To allow for easier summary of your responses, please indicate which of the following you refer:

a) Increase minimum required treatment capacity compared to current requirements (make systems larger for a given residence)

b) Keep current sizing (minimum treatment capacity requirement is residential estimated sewage flow +200 gpd)

c) Go with the proposed sizing (minimum treatment capacity is residential estimated sewage flow +100 gpd, making some systems smaller)

d) Further reduce sizing to estimated sewage flow (minimum treatment capacity is residential estimated sewage flow, making systems smaller)

Please respond with your preference and any additional comments by March 30, 2017.

For context, if an aerobic treatment unit is used as part of an engineer-designed performance-based treatment system, the minimum required treatment capacity has to be sufficient for the estimated sewage flow, rather than the aerobic treatment unit Table IV, resulting in smaller systems.

For further information, find attached the complete rule proposal, which also covers some other issues. Please contact me with any further questions.

Regards,

Eberhard Roeder
The rule change proposal looks as follows:

<table>
<thead>
<tr>
<th>Number of Bedrooms</th>
<th>Building Area in square feet</th>
<th>Minimum Required Treatment Capacity gallons per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 or 2</td>
<td>Up to 1200</td>
<td>400</td>
</tr>
<tr>
<td>3</td>
<td>1201-2250</td>
<td>500</td>
</tr>
<tr>
<td>4</td>
<td>2251-3300</td>
<td>600</td>
</tr>
</tbody>
</table>

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

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 shall apply.