Sewage Handling and Disposal Advisory Committee Meeting
Virginia Department of Health
January 23, 2013

List of attendees at central location:

Advisory Committee Members:

Vincent Day – Chairman	David Fridley	R. V'lent Lassiter
Peter Kesecker	Allen Knapp	Robert Lee
Michael Lynn	Curtis Moore	Joel Pinnix
Valerie Rourke	James Hall	James Pyne

Guest:

Lance Gregory- VDH	Marcia Degen- VDH	Dwayne Roadcap- VDH
Peter Basanti- VDH	David Tiller- VDH	Eric Aschenbach- VDH
Jim Bowles – VDH	Tom Ashton- AMC	Cody Vigil- VAMAC/VOWRA
Jeff Walker- VAPSS	Amy Pemberton- VDH	Chris Beatley- Premier Tech
Bob Mayer- AMC	Tony Bible- SWEC	James Slusser- Alternative Septic
Matt Tolley- VAPSS	Michael Burch- Nature Works	
Bob Marshall- Cloverleaf Environmental		

List of attendees at remote location:

Guest:
Gary Coggins- VDH

Administrative:

1. Welcome & Introductions of Members

Mr. Gregory – Introduction of Mr. Chris Beatley and Mr. Matt Tolley. Mr. Colin Bishop, representative for manufacturers, has asked Mr. Beatley to sit as his proxy. VAPSS has requested a replacement of their current committee member Mr. John Harper. Mr. Tolley has been selected by the VAPSS Board as his replacement, pending final approval by the State Health Commissioner.

Chairman Day: Introduction and committee rules.

Introduction of members.

2. Approve Agenda

Chairman Day: Addition to new business, president of VAPSS, Mr. Walker, would like to address committee.

Approved – Mr. Moore motioned, Mr. Lee second, unanimous approval.

3. Review and Approve Minutes (May 17, 2012)

Chairman Day: Motion to approve as amended by Mr. Lee – Mr. Moore second; unanimous approval.

Old Business

1. Status of AOSS Implementation Manual.

Dr. Marcia Degen: The first draft implementation manual has been sent to SHADAC members for comment. A second draft of the manual has been completed but needs to go through internal discussion at VDH.

Dr. Degen then presented a Power Point presentation (see attached on Townhall) highlighting the first draft with request for feedback from SHADAC members on five specific items.

- AOSS Certification Letters
- Processing renewable operation permit (OP)
- Information on OP
- Operation and Maintenance manuals
- Bulking of solids

<u>AOSS Certification Letter discussion</u>

Dr. Degen: VDH has proposed a table (Table A in the draft implementation manual) with prescriptive loading rates for AOSS certification letter designs when the design is being completed as part of a bare application by a VDH OSE. Loading rates for AOSS certification letters designs by private sector evaluators would not be reviewed using this table, they would be reviewed using Table 1 of the AOSS Regulations. VDH staff has provided comments on this proposal and VDH would like to hear the SHADAC's thoughts on this table.

Dr. Pyne: I don't think having an arbitrary table that contradicts the table in the regulations is appropriate. Using this second table as guidance for VDH designs could result in the use of this table as a defacto regulatory requirement. There should be only one table, and that table should be based in scientific facts supported by data. If you have a scientific and engineering based table in the regulations for private sector designers you don't need to change that in the policy for VDH OSE designs.

Mr. Lynn: The table in the regulations gives the designer flexibility. Introduction of a second, prescriptive, table in this policy could lead to design arguments during Level I reviews of private sector designs.

Jeff Walker, VAPSS President: There should not be separate standards for the private and public sector designs.

Mr. Moore: How did VDH come to the decision that VDH should even conduct bare application designs for AOSS certification letters? VDH employees cannot do the permit designs for AOSS, so what is the thought process? What happens when a private evaluator comes back and says they cannot design an AOSS in the area where a VDH OSE has conducted an evaluation and issued a certification letter?
Mr. Fridley: Is that an experience that any private sector designer has experienced?

Mr. Moore: I've heard of similar issues with subdivision lot approvals. However, my question is do VDH employees fully understand the different options for AOSS designs; how to design an AOSS rather than perform a review of an AOSS design completed by the private sector? Most districts in northern Virginia send all AOSS designs to the private sector.

Mr. Kesecker: You are forcing the property owner to pay twice because most private OSE's would completely re-evaluate the site if the certification letter evaluation was completed by a VDH OSE.

Mr. Fridley: That is a professional opinion, the private sector evaluator could use the existing work completed by the VDH OSE.

Mr. Moore: Need to make sure, if you go down this road, that evaluations and designs meet the same standards set for private sector designs.

Mr. Pinnix: This has always been a confusing issue. 163.5 give OSE's the authority to complete designs compliant with the Sewage Handling and Disposal Regulations (SHDR). 255.F of the SHDR states "Certification letters shall be issued only for conventionally approved systems." 163.6 only speaks to designs, and does not mention certification letters.

Dr. Degen: The Code of Virginia is not specific to COSS or AOSS. VDH policy has expanded to allow designs compliant with the AOSS Regulations.

Mr. Moore: If you don't allow AOSS certification letters, then you end up back where we were before certification letters were covered by the Code. If you don't issue AOSS certification letters and the site will not support a COSS then you would need a construction permit just to complete a property transfer.

<u>Renewable OP discussion</u>

Dr. Degen: One of the major issues VDH is trying to deal with processing permits for large AOSS where there are multiple connects that will be added on periodically during the build out process. If the owner only constructs a portion of the proposed design what is the appropriate flow to assess performance standards and O&M requirements? How does that affect the issuance of the OP?

Mr. Lynn: Does staggered construction relate to the number of homes connected? What if the whole system is installed, but there is only one house?

Dr. Degen: This would be on the installed capacity, not the flow.

Mr. Lee: In Loudoun the first few houses were on pump and haul, and then once flow meets a certain point the onsite system would be connected. This was spelled out in the permit.

Dr. Degen: So Loudoun specified what pieces of equipment were on line?

Mr. Pinnix: You may not have pending regulations, but there is a trigger for nitrogen standard in December of this year that will kick in, and that could be significant.

Curtis Moore: If you have an existing system permitted before the AOSS Regulations, then they have no renewable operation permit?

Dr. Degen: Not until they require a modification/repair of the existing system and a new permit is issued. Sewer connections typically have not triggered such a permit.

Mr. Moore: There is also the issue of treatment being done individually at each home.

Dr. Degen: That was part of this discussion.

Mr. Pinnix: This is a big issue, you have a staged build out over time, that time frame exceeds your permit expiration date. VDH needs to figure out how to handle those situations. If you're putting treatment units in at each home then you're designing under the requirements in place at the time. When later homes are installed do all the existing treatment units have to be brought up to the most recent standards?

Mr. Knapp: What we have is an imperfect law, and we are seeking guidance on this item. We don't think that issuing individual OP's for the treatment unit at each home meets the requirement for a single owner of the system. We understand that 600 homes are not going to be constructed within 36 months of the permit being issued.

Mr. Moore: I think the best approach is if you have the permit then you continue to allow connections under that initial permit design.

Dr. Degen: We also were looking at the issue of O&M.

Ms. Rourke: Is it possible to ask about the proposed phased build out during the initial construction permit for the first phase.

Dr. Degen: We typically get a design for the entire build out.

Mr. Pinnix: Agree with Mr. Moore, in terms of O&M if you have individual treatment units, VDH should issue the construction permit for that lot to connect to the conveyance system. That unit has to meet the requirements based on the flow from that individual home. Once you have 60 units you're getting 60 samples per year.

Mr. Lee: Each design is going to be case by case. I think you can work with the PE for a phased construction based on build out, time frames, etc.

Mr. Walker: Support Mr. Pinnix and Mr. Lee. Also, there is no reason to put this in the code or regulations.

Mr. Moore: Recommend that individual units at each house be held to requirements for flow from the house, and if there is a single unit treating all homes then you meet the requirements for total flow from the entire development. For individual units you just wouldn't get nitrogen reduction on the first 30 permits or so until flow to the dispersal field requires nitrogen reduction. Don't think it would be wise to go back to individual units and require additional treatment.

Dr. Pyne: The issue is you have too many owners.

Mr. Lee: Why aren't these considered individual systems, we've agreed we wouldn't sample the drainfield.

Mr. Walker: The permitted area is receiving a certain nutrient load, as long as you don't exceed the permitted nutrient load, we are not permitting single homes we are permitting a loading rate to the field.

Mr. Pinnix: The definition of an owner includes any individual, group of individuals, or group of individuals acting as a group. POTW gets to negotiate their compliance schedule. They also have long term low interest rate funding available. There is a big difference between that and a homeowners association trying to go to a bank to receive funding for upgrades. I think if you go down this road there will be a lot of GA meetings on this topic.

Mr. Knapp: So Mr. Moore you are saying that we would separate the individual treatment units from the central drainfield.

Mr. Moore: An OP would be issued to the individual owner.

Mr. Knapp: So the owner of the drainfield would not be responsible for the compliance, it would fall on each individual treatment unit owner.

Mr. Moore: The building department needs and Operation Permit to allow occupancy of the house. You need something that says this property has adequate sewage treatment.

Mr. Lynn: The developer is going to choose the path of least resistance, which may not be the way we envision large AOSS.

Mr. Walker: It not reasonable to think that VDH can track these individual treatment units.

Mr. Pinnix: In the EPA document and WIP document, the general consensus is that for residential plan developments community systems are encouraged. These regulations and this path forward have created a disincentive to do community systems. How do we get to the point where we encourage and make it economically feasible to use these systems?

Mr. Lee: In the implementation manual it would be good to have a general discussion of operation, what the operator should be doing, etc.

Mr. Walker: Only PE's and OSE's should provide direct services.

Status of AOSS inventory

Dr. Degen: As of November 2012 there were 16,714 AOSS in VDH's statewide database compared to 19,355 in local databases. We still have a ways to go, but we are making significant progress.

Mr. Moore: Have you request any information from manufacturers. Do you want it from VAMAC and Orenco?

Status of enforcement for violations of the AOSS Regulations

Dr. Degen: Since 2010 VDH has received more than 13,000 reports. Eighty-six percent of those reports concluded that the system was functioning properly. Seven percent indicated that the licensed operator performed maintenance on the AOSS to return it to normal function. Seven percent of reports indicated a problem with the AOSS such that it was not functioning in accordance with the performance requirement and could not be returned to normal function at the time of the site visit.

Civil penalty regulations update

Dr. Degen: Final at Governor's office day 249. Once released final 30 day comment.

VDH staff training for operation of AOSS

Dr. Degen: Have gone through several online classes on performance based permitting versus prescriptive, learning to lean on the data instead of set design criteria. VDH employees are not operators.

2. Status of Discharging Regulations.

Dr. Degen: At Secretary's office day 417.

3. Update on EPA Need Survey.

Dr. Degen: This year, VDH provided estimates for the onsite sector needs projected over the next 20 years. Data submitted by deadline and accepted by EPA. DEQ discharging facilities that have been identified and total $6.5 billion dollars. VDH's projections for both new and repaired onsite systems at $3.4 billion. If so this is a huge increase from four years ago. In 2004, we had $4.7 billion and in 2008 we had $6.85 billion.

Mr. Lee: Where new system needs allowable.

Dr. Degen: This was both.

4. National Fish and Wildlife grant update.

David Tiller: Mr. Knapp and Eric Aschenbach discussed this at the last SHADAC. Through this grant we will be providing a cost share program for owners of onsite sewage system installed under a House Bill 930 wavier that are located in the Three Rivers Health District. We are currently working through the award agreement. The agreement says that we will have a $750,000.00 match. If we have problems with participation then we may be able to lower the amount of match or expand the area. 124 property owners in Three Rivers have taken waivers to treatment. We could not expand this to properties that are not in compliance, i.e. failing onsite sewage system. Incentive for this program is that we will pay ½ the cost of installing a regulatory compliant system. Eligibility applications will be reviewed by a team, either on a first come first serve basis or we will give a time frame to receive applications and batch review applications based on site conditions. We would send out a prequalification letter, the owner would get the system designed, get a permit and three bids. VDH would then send the cost share approval letter, the system gets installed and approved, and then the owner is given a check for 50% of the total cost.

Mr. Walker: Is there any means testing?

Mr. Tolley: Would design fees be included in reimbursement?

Mr. Moore: Suggest increasing the max amount above $15,000. I think you're going to run into cost above $15,000 for regulatory compliant installations on these sites.

Mr. Lynn: I thought that under the waiver the only thing they would have to do is install treatment. Should consider a document where the payment is given directly to the contractor.

Mr. Knapp: $15,000 comes from DCR and their septic cost share program. DCR capped the program at $15,000 and since we have partnered with DCR they did not want us to change that.

It may be changed in the future with collaboration with DCR. Grant was written that owner could sign payment to the contractor.

Mr. Pinnix: In Three Rivers a lot of non-compliance is related to depth to groundwater, so do you have to bring the entire treatment works up to regulatory standards.

Mr. Tiller: Yes.

Mr. Fridley: If there is some way to make money go directly to the contractor as suggested by Mr. Lynn that would be beneficial and make things go more smoothly.

Mr. Lee: The owner needs to know that this grant is considered income and will impact their taxes. But if the money goes directly to the contractor and they are an Inc. then it will not be income.

Mr. Tiller: If we get a lot of participation, and we have to turn some people away, what are the criteria? That is the problem we are dealing with.

Mr. Walker: Need to start thinking about innovative treatment methods once you look at design cost and denitrification. Should look at VDH taking the lead role in the design process.

Bob Marshall, Cloverleaf Environmental: Do you have such a demand for these upgrades that you will have to turn people away.

Mr. Tiller: There is also the potential for connection to county sewer.

Mr. Moore: You also need to take into account that these systems will require O&M, which is not paid for by this grant.

Mr. Lee: People aren't going to come banging on your door for this grant. Is there some entity that could take over O&M of these systems as part of the program?

Mr. Pinnix: How many HB 930 waiver systems exist in Three Rivers health district?

Mr. Tiller: 124.

Mr. Pinnix: So you're looking for 80% of owners to participate in the program.

Mr. Moore: Does the match have to come from the homeowner?

Mr. Knapp: The rules for federal grants are complex; pretty sure you cannot use another federal grant to match a federal grant. Our hope is that these individuals would like to remove these waivers before they are ready to sell.

Chairman Day: Meeting in recess for 30 minutes.

5. Update on Chesapeake Bay BMP subcommittees.

Dr. Degen provided a PowerPoint presentation (see attached) discussing VDH's involvement in the development of onsite sewage system BMP's for the Chesapeake Bay model.

Dr. Degen: The workgroup is developing a matrix that would allow for nitrogen reduction in the model based on a combination of treatment, dispersal to create a composite percentage removal of nitrogen.

Chairman Day: Is 4kg the goal.

Marcia: No, that's what they anticipate a conventional system is getting currently

New Business

1. Chesapeake Bay onsite guidance and VDH comments/implementation.

Dr. Degen: Comments submitted December 2012 on November 2012 draft of EPA's Model Program for Onsite Management in the Chesapeake Bay Watershed. Many of the comments were repeated from the review of the first draft.

2. 2013 Legislative Session.

Mr. Knapp- OEHS has been assigned 4 bills and watching 1 other. HB 1505, HB1611, HB1726, and HB1448. Our job is to advise the administration on what the bill does, who it affects, and make any recommendation. HB1505 bill gives the Board the authority to use a portion of the money in the Fund to provide or guarantee betterment loans. As initially proposed the bill increased the dollar amount put into the Indemnification Fund from $10 to $25. Amendment in subcommittee was to take that back to $10. The department has determined that we would need some resources to implement the program, 1 full time employee (FTE) in the first year and additional FTE(s) in later years.

HB1611 is similar to bill presented by Delegate Hugo in previous years requesting to reduce inspection frequency of AOSS to once every two years.

HB1726 bill take GMP's for chamber and bundled expanded polystyrene and moves them into regulations, through an emergency enactment clause. The bill was amended to include other dispersal methods deemed necessary by the Board of Health as part of that mandate.

HB1448, gives local government the authority to make loans to help fix onsite sewage systems.

Watching HB 1482. This is a DPOR bill, originally allowed a Class 1 waterworks operator to site for the exam for conventional onsite sewage system operators. Was amended to remove

waterworks operator, but still would allow Class 1 wastewater works operators to sit for the exam.

Mr. Moore: Conventional operators can only maintain conventional systems; alternative operators could operate both conventional and alternative.

Dr. Degen: A class IV or higher can currently sit for the exam with 6 months experience or a class.

Bob Mayer, American Manufacturing: What is the status of the remainder of the funds in the indemnification fund as amended by the betterment loan bill? Where does the money go? What happened to OSE training?

Mr. Moore: The delegate realized that the Authorized Onsite Soil Evaluator program under VDH no longer exists, so there was no objection to removing the language. There was never any training done.

Mr. Walker: As an OSE, HB1726, have a lot of heart burn over the use of proprietary product designs, and who has the authority to use these systems. HB1482, I'm an installer and designer, I cannot get an operator's license and in my area and there is a lack of operators. The only way to become an operator is to take a class that doesn't exist or to work for another operator for 6 months. OSE's should be allowed to sit for the exam.

Mr. Mayer: HB1726, if that passes are you going to consider other dispersal systems?

Tony Bible, SWEC: HB1726, there are a couple of concerns I have with the bill; we can't effect the bill here today. A lot of VDH OSE's have a problem with installers being allowed to make a substitution of chambers. Where does VDH get the authority to grant this size reduction? This is crossing over to practicing engineering without a license. Would it be proper at this time for the Board to consider rescinding this GMP, since the authority to make that decision is delegated to the design OSE or PE?

Mr. Lee: VDH employees must have an OSE license to design systems. Changes to the design should not be allowed unless the design uses the term "or equivalent". VDH is accepting the liability from the installer and the designer for anything that goes wrong.

Mr. Walker: Installers are winning bids on jobs because they take a full reduction when the other contractors bidding on the job will not.

Mr. Bible: This blanket decision can place the VDH OSE license at jeopardy by the contractor making design decisions.

Mr. Moore: DPOR and the WOOSOPP board has created a work group to look at the roles of designers and installers, and one item is whether installers cross the boundary in this instances.

The hope is that moving items out of policy and into regulations may not bring over all parts of the policy through the public vetting process.

Mr. Bible: As these move from policy to regulations these products become no different than gravel. There is currently a warranty. Without the warranty there is no protection for the public. If VDH takes a similar stance that all VDH designs will be designed with a reduction it could create conflicts of interest.

3. Private sector concerns regarding VDH bare application designs.

Dwayne Roadcap, VDH: VDH has been approached over many months with concerns regarding VDH OSE's; work product by VDH is not the same as the private sector and that the work product expectations should be the same (i.e. cover pages, certification statements, license number on the cover page). Higher level concern, is the health department putting enough information on it designs (i.e. pump information) and is the lack of detail requiring installers to perform design in selecting specific products. We have committed to reexamining GMP 126.B, speaking with VDH OSE's, meeting with DPOR staff and WWWOOSSP Board, internal checking of work products, and surveys. Anticipate that moving forward VDH will be making some changes in work product expectations.

4. Impact of local governments to issue any ordinance more stringent than VDH regulations. Pressure on VDH to manage and enforce.

Mr. Lee: There have been a number of meetings with delegates over the last year. Mr. Knapp may know more.

Mr. Knapp: The genesis of this comment comes from Delegate Lingamfelter's bill last year addressing Fauquier County's concern regarding AOSS that would have prevent any locality from requiring a bond on the installation or operation of AOSS. The bill was given to the Housing Commission for further study along with other bills regarding AOSS. Delegate Lingamfelter held stakeholder meetings, to address local government concerns that some homeowners cannot afford to fix their system when it fails or they may refuse to fix the system. During the stakeholder meetings the issue came up as to what authority local governments have in regulating AOSS. The newest opinion from the AG's office came out during that time frame. Delegate Lingamfelter wanted to focus these stakeholders on the financial aspects rather than the authority aspect. What came out of that process was the betterment loan bill. Another thought that came out during the stakeholder meetings was to allow localities to place liens on properties to pay for the repair of systems.

Mr. Moore: There were issues with who would hold the bond, so the issue was dropped.

Mr. Lee: When VDH met with Loudoun County they wanted to make sure that VDH would do the necessary enforcement.

Mr. Knapp: Civil penalties are one topic that was discussed, and Loudoun County is the only one that has chosen to take that route. Our regulations for civil penalties have not passed the Governor's office, and are necessary for VDH's enforcement program.

Mr. Pinnix: In light of the AG's latest opinion is VDH going to provide any guidance to local offices regarding that opinion and reconcile permitting based on state standards versus local ordinances.

Mr. Pinnix: Recommend that VDH prepare a draft guidance document on the local ordinance versus state regulations standard that is consistent with the AG's opinion.

Seconded by Mike Lynn:

Mr. Moore: Consistency is the friend of the public.

Mr. Lee: Some of this gets into planning and development where localities have authority.

Mr. Moore: May not have been intended, but the AOSS Regulations do not mention the reserve area requirements. Most reserve area requirements are held in local ordinances.

Mr. Lynn: Part of the discussion comes down to if one of these issues comes up, whether the design meets state regulations but county ordinances supersede, why are local health departments asked to consult county attorneys and not the state attorneys.

Chairman Day: Mr. Pinnix, could you explain your recommendation.

Mr. Pinnix: There was a bill passed a few years ago that essentially restricts local authority when a system would otherwise be permitted by state requirements. The AG has now said that local ordinances that are more stringent than state requirements and would prohibit a system from being installed, are preempted. Local health departments and the private sector should be given guidance on how local ordinances will be upheld in light of the AG's opinion.

Mr. Moore: Initially the question was regarding O&M, but the latest AG opinion encompassed O&M and design of AOSS.

Mr. Pinnix: There may be conflicts where local ordinances are perceived to exists, but are actually preempted under the AG's opinion.

Chairman Day: Call for a vote.

Mr. Pinnix, Mr. Moore, Mr. Lee, Mr. Lynn, Dr. Pyre, Mr. Kesecker, Mr. Hall, and Mr. Beatley (8) voted in favor, all other member abstained from the vote.

Mr. Pinnix: Motion to adjourn the meeting.

5. Proposed amendments to the state plumbing code by DHCD regarding the design, construction, operation and maintenance of non-potable water systems (rainwater, gray water and reclaimed water)

Ms. Rourke: I feel this item is important. DHCD developed a new chapter within their plumbing code for reclaimed water. DEQ was concerned that this would supersede DEQ requirements for water reclamation. This code will supersede VDH requirements for graywater and rainwater collection and re-use. This will allow the introduction of graywater within the house, and there is little discussed in the way of treatment and operation and maintenance. You can install the best system, but unless you maintain that system it can represent potential public health problems. DEQ suggested that DHCD consider similar requirements as those for AOSS O&M. DHCD does not follow the APA, so there is not as much public involvement, except for people that sit on their workgroups. Just wanted to point this issue out to the committee. Building inspectors will be approving these systems.

Mr. Lee: Are these systems going to be permitted?

Ms. Rourke: A permit from the local building official.

Mr. Lee: DHCD use the term lavatory in gray water. This is not gray water it is black water.

Ms. Rourke: DHCD used their terms, not the definition of the term used by other agencies. It's a fast moving process.

6. VAPSS President to address the committee.

Mr. Walker: VAPSS concern is the science of soil and locating of systems in soil. We are going to begin providing more educational opportunities and look forward to working with the regulatory community.

Mr. Pyne: I'm working with a YMCA camp and they want to include some educational information. If anyone is interested in helping please let me know.

Mr. Moore: Think this committee should start discussing moving to privatization of onsite designs.

Mr. Marshall. Would suggest defining the roles of VDH and private sector when a permit is being issued.

Ms. Rourke: When is the deadline for comments on the AOSS Manual?

Mr. Moore: Will the industry have a chance to comment on this document before the final draft is issued?

Dr. Degen: I'm not sure.

Chairman Day: Should we set a tentative date for the next meeting?

Mr. Lee: Sometime in April.

Chairman Day: Tentative date is April 17th.

Chairman Day: Move to adjourn.

Mr. Moore: Second the motion.

Chairman Day: The meeting is adjourned

Attachment #1

Sewage Handling and Disposal Advisory Committee Meeting

AGENDA

Date: January 23, 2013
Time: 10 am to 2 pm
Location: Main Floor Conference Room
VDH Main Office
109 Governor's St.; Richmond VA 23219

Administrative
1. Welcome & Introductions of Members
2. Approve Agenda
3. Review and Approve Minutes (May 17, 2012)

Old Business
1. Status of AOSS Implementation Manual…(Degen)
    a. Modification of loading rates and design flow for systems permit and installed prior to AOSS Regulations.
    b. Status of AOSS inventory.
    c. Civil penalty regulations update.
    d. Status of enforcement for violations of the AOSS Regulations.
    e. VDH staff training for operation of AOSS.
2. Status of Discharging Regulations…(Degen)
3. Update on EPA Need Survey…(Degen)
4. National Fish and Wildlife grant update…(Tiller)
5. Update on Chesapeake Bay BMP subcommittees…(Degen)

New Business
1. Chesapeake Bay onsite guidance and VDH comments/implementation…(Degen)
2. Update on proposed legislation for 2013 session…(Roadcap)
3. Private sector concerns regarding VDH bare application designs…(Roadcap)
4. Impact of local governments to issue any ordinance more stringent than VDH regulations. Pressure on VDH to manage and enforce. (Bob Lee)
5. Proposed amendments to the state plumbing code by DHCD regarding the design, construction, operation and maintenance of non-potable water systems (rainwater, gray water and reclaimed water)…(Roadcap)
6. VAPSS President to address the committee.

Adjourn

Attachment #2

AOSS Implementation Manual and Chesapeake Bay Presenations (see the PDF attached on the Townhall website)

SEWAGE HANDLING AND DISPOSAL ADVISORY COMMITTEE

Update January 23, 2013

Implementation Manual Main Topics

- Administrative
  - Processing 163.6
  - Certification letters
  - Operation Permits
  - Repairs, especially in SHWT

Implementation Main Topics

- Technical Issues
  - Wetlands
  - Direct Dispersal
  - Horizontal Separations
  - Permeability Limiting Feature vs Limiting Feature
  - Bulking of Solids
  - Etc.

Implementation Main Topics

- Sampling and O&M Requirements
- VENIS
- Compliance/Enforcement

Implementation Manual Status

- First Draft June 2012
- 142 Comments from LHD
- Second Draft for internal review
- Next Steps
  - Complete internal review
  - Return to LHD for comment
  - Finalize

Types of LHD Comments

- Concern over time constraints on 163.6 permits
- Certification letters: not conservative, allows 163.6
- Need VENIS reminders/flags for renewable OP, O&M report, etc.
- Who can issue repair permits for AOSSs?
- Repairs and direct dispersal is confusing
- No ability to require wetland delineation
- Need detail on direct dispersal processing/submittals requirements

Types of LHD Comments

- Permeability limiting feature vs limiting feature not clear
- Initial sample within 180 days of startup, but what if house is vacant?
- Should be able to hold OP till O&M manual is complete
- Need more detail on compliance and enforcement

Request for Input/Discussion

- Certification Letters
- Processing renewable OP
- Information on OP
- O&M Manuals
- Bulking of Solids

Certification Letters – PE/OSE submittals:

- No renewable operating permit;
- complies with the *SHDR* or *AOSS Regulations;*
- the site is not in a wetlands;
- the site has at least 6 inches of suitable, naturally occurring soil with no limiting features;
- an abbreviated design is sufficient to certify the site (including any engineering calculations in accordance with 12VAC5-613-80.12); and
- Part V of the *AOSS Regulations* is not used to justify the design.

Certification Letters – Bare Applications

- No renewable operating permit;
- the proposal complies with the *SHDR* or the *AOSS Regulations*;
- the site is not in a wetlands;
- the site has at least 6 inches of suitable, naturally occurring soil with no limiting features;
- the site or design does not trigger an evaluation under 12VAC5-613-80.12;
- an abbreviated design is sufficient;
- the loading rate complies with or is less than Table A in this manual.

Table A. Trench Bottom and Area Loading Rates at 10-% Reduced Rates for VDH Staff Processing Bare Applications for Certification Letters.

	Septic Tank Effluent*			TL-2 Effluent				TL-3 Effluent			
mpi	100% Gravity Loading (gpd/ft^2)	100% LPD Loading (gpd/ft^2)	100% Drip** Loading (gpd/ft^2)	90% Gravity Loading (gpd/ft^2)	100% Max*** Loading (gpd/ft^2)	90 % LPD**** Loading (gpd/ft^2)	90 % Drip** Loading (gpd/ft^2)	90% Gravity Loading (gpd/ft^2)	100% Max*** Loading (gpd/ft^2)	90% LPD**** Loading (gpd/ft^2)	90% Drip** Loading (gpd/ft^2)
5	0.91	0.91	0.30	1.62	1.8	1.62	0.54	2.7	3.0	2.7	0.9
10	0.83	0.83	0.28	1.5		1.50	0.5	2.25		2.25	0.75
15	0.76	0.76	0.25	1.36		1.36	0.45	2.05		2.05	0.68
20	0.68	0.68	0.23	1.26	1.4	1.26	0.42	1.8	2.0	1.8	0.6
25	0.63	0.63	0.21	1.14		1.14	0.38	1.46		1.46	0.49
30	0.57	0.61	0.20	1.02	1.2	1.08	0.36	1.27	1.5	1.35	0.45
35	0.52	0.59	0.20	0.94		1.06	0.35	1.06		1.19	0.4
40	0.48	0.57	0.19	0.86		1.02	0.34	0.97		1.15	0.38

LHD Comments

- Designs using Table 1 from AOSS regs are 163.6 designs and cannot be used for cert letters
- Provide one loading rate table for reviewing both private and VDH certification letters
- Include pads
- Clarify that horizontal separations from SHDR apply (to eliminate 163.6 designs)
- General Concern over how to avoid issuing certification letters for essentially163.6 designs

THOUGHTS?

Renewable OPs

- Any large AOSS (>1,000 gpd)
- Any direct dispersal to groundwater

Renewable OP

- 5 year expiration
- Prior to reissuance VDH will review (1) performance; (2) sampling history; (3) maintenance history to assess any outstanding compliance issues
- Get compliance or owner commits to compliance plan with timeline prior to reissuance.

Renewable OP

- Facility must comply with current regulations at reissuance.
- Likely that a compliance schedule would be written into new reissued permit if construction needed to comply.
- These permits will start to look more like DEQ's discharge permits.

Staggered Construction & Renewable OP

If owner constructs drainfield for buildout flow but only constructs treatment for ½ that flow, what is the appropriate flow to use to assess performance standards and O&M requirements?

Staggered Construction & Renewable OP

- The OP will be written around the most limiting component so if only ½ the treatment capacity is installed, the OP will only recognize the installed capacity and performance and O&M are based on that installed capacity.
- When additional treatment is added, the SYSTEM OP is reissued for the higher total flow and the performance standards and O&M reflect the new design flow.

Information on Operation Permits

Proposed

- Design Flow, gpd
- Bedrooms (for smalls)
- Treatment level
- Disinfection standard if required
- Monitoring frequency and parameters
- O&M requirement including reporting

THOUGHTS???

O&M Manuals

Purpose: to provide documentation of the design for the owner and operator so that the system can be operated and maintained properly

Must be submitted prior to issuing OP.

Can you hold up OP if O&M is inadequate? No. **[LOT OF CONCERN]**

O&M Manuals

- Checklist provided
- Recommended Outline
- Recommended Cover Page for smalls
  - Cover page asks for all required info OR its location in the manual

Virginia Department of Health

Small Alternative Onsite Sewage System Operation and Maintenance Manual Cover Page

(not suitable for direct dispersal)

Please supply all requested information (form will expand as information is entered). Incomplete forms will be returned to the owner.

SYSTEM CONTACT INFORMATION	**Manual Prepared by:**
Owner:	Name:
Owner Address:	Company Name:
Facility Tax Map ID:	Date Prepared:
Facility Address:	Address:
Telephone:	Telephone:
Email:	Email:

DESIGN DESCRIPTION	**Design Flow (gpd):**
Effluent Limits (check all applicable limits): ☐ TL3; ☐ TL2; ☐ <200 col/100 ml fecal coliform; ☐ TRC >1.0 mg/l ☐ Other (please describe)	
Dispersal System Installation Depth (inches):	
Required Inspection Frequency: Annual	**Recommended Inspection Frequency:**

System Components (check all that apply)

- ☐ Septic tank
- ☐ Treatment unit. Provide name and model of unit.
- ☐ Disinfection. If yes, check the applicable method: ☐ Chlorine; ☐ UV; ☐ Other
- ☐ Pump Station. If yes, provide the design pump rate and TDH.
- ☐ Other Treatment. Please explain.
- ☐ Dispersal Field
  - ☐ Gravel trenches
  - ☐ Graveless trenches
  - ☐ LPD
  - ☐ Drip dispersal
  - ☐ Sand mound
  - ☐ Pad

Performance Sampling Requirements

Initial start up grab samples are to be collected within 180 days of issuance of the operation permit and analyzed in accordance with 40 CFR Part 136 or alternative methods approved by USEPA. Select the appropriate frequency for subsequent routine samples:

- ☐ Generally approved systems are required to sample once every 5 years.
- ☐ Non-Generally approved systems are required to provide 4 additional samples within the first two years at an interval of 3 to 6 months apart. After the initial 5 samples are collected, the system reverts to annual sampling.

Select all parameters for performance monitoring and identify the sample location point. If a drawing is attached that identifies the sample points, reference the location of the drawing (document title /page number).

- ☐ BOD_5 Sampling Location:
- ☐ Fecal Coliform Sampling Location:
- ☐ TRC Sampling Location:

Additional Required Items Attached

- ☐ Dimensioned Site Layout
- ☐ List of Control Functions and how to use them
- ☐ How to operate system to meet performance standards
- ☐ Contact information for replacement parts
- ☐ Component and system O&M schedules
- ☐ Manufacturer manuals

Bulking of Solids

- 12 VAC 5-613-80.15 states “All treatment units or treatment systems shall prevent the bulking of solids to the treatment area.”
- VDH has refrained from creating a ‘list’
- How to clarify for staff?
  - List?
  - Options to meet?
  - Require designer to state how addressed?

Next Steps

- Details on Renewable Operating Permits
- Enforcement Details
- Inspection Philosophy

Discussion

AOSS, O&M UPDATE

Status of AOSS Inventory

November 2012 Info to Housing Commission

The number of AOSS in the VDH's statewide database (16,714) compared to the number of AOSS in local databases, which are not yet part of the statewide database (19,355).

Local/statewide database

- Franklin County 73/96
- Loudoun 1436/898
- Frederick County 1298/755
- Hanover County 296/296

O&M

- Since *2010, VDH has received a total of **13,232 reports.***
- Eighty-six (86%) percent, or **11,348 of those reports concluded the systems were** working properly. The operator might have provided routine maintenance during the visit.

O&M

Seven percent (7%), or **971 reports indicated that the licensed operator performed** operation and maintenance on the AOSS to return it to normal function. This work would not be considered preventative maintenance.

Seven percent (7%), or **913 reports indicated a problem with the AOSS such that it** was not functioning in accordance with the performance requirements of the AOSS and could not be returned to normal function at the time of the visit.

O&M Reporting Status

- Some counties have a relatively low amount of reporting while others have a relatively high amount.

Prince William	**15 %**
Augusta County	68%
Loudoun County	95%
Franklin County	18%
Shenandoah County	62%

CHESAPEAKE BAY ISSUES

BMP Development

- Drafts of baseline conditions
- BMPs for treatment being developed
  - Protocol for proprietary treatment units
  - Generic units: elevated sand mounds; constructed wetlands, recirculating media filters
- Soil BMP development for
  - Shallow Pressure dosing (drip)
  - Various soil types

Attenuation rates to be considered by next workgroup

- Matrix in development
- Allows for combination of treatment, dispersal and soil to create a composite % removal
- Looks like baseline is a 20% removal (4 kg TN at edge of drainfield) so excess is a BMP
- Addition of BMPs is ongoing process

	A	B	C	D	E	F	G
1	**Exsitu (pre) Treatment Type**						
2		% reduction	mg/l				
3	**Septic tank effluent TN**		40				
4							
5	Submerged constructed wetlands	15%	34				
6	Single pass filters	30%	28				
7	Suspended growth ATU	30%	28				
8	Recirculating media filter (RMF)	50%	20				
9	RMF with denite design	70%	12				
10	Pretreatment with denitrification-driving compound addition	90%	4				
11							
12							
13	**Soil Treatment Unit Characteristics**						
14	**For Pre-Nitrified Effluent**	**Coarse Textured Soils**		**Medium Textured Soils**		**Fine Textured Soils**	
15		% reduction	mg/l	% reduction	mg/l	% reduction	mg/l
16	**Exsitu effluent TN**		40		40		40
17							
18	Gravity distribution	15%	34	30%	28	40%	24
19	Pressurized distribution (e.g., low pressure pipe)	20%	32	40%	24	60%	16
20	Full coverage pressurized distribution (e.g., spray, drip)	25%	30	50%	20	80%	8
21							
22	**Un-Nitrified Effluent**	**Coarse Textured Soils**		**Medium Textured Soils**		**Fine Textured Soils**	
23		% reduction	mg/l	% reduction	mg/l	% reduction	mg/l
24	**Exsitu effluent TN**		40		40		40
25							
26	Gravity Distribution	10%	36	20%	32	30%	28
27	Pressurized Distribution (e.g., low pressure pipe)	15%	34	30%	28	50%	20
28	Full coverage pressurized distribution (e.g., spray, drip)	20%	32	40%	24	70%	12
29							
30	*** Assumes sufficient soil organic matter; decrease removal percentages by half for insufficient organic matter**						
31	*** Assumes that sufficient anoxic conditions exist in the STU; decrease removal percentages by half for insufficient anoxic conditions**						
32	*** For systems with shallow placed dispersal and managed vegetation, multiply removal percentages by 1.5**						
33							

L17

	A	B	C	D	E	F
1	**Exsitu (pre) Treatment Type**	Score			**Score range**	**Model input concentration**
2	Septic tank only	0			0-15	40 mg/l
3	Submerged constructed wetland	10			15-30	25 mg/l
4	Single pass filter	15			30-45	10 mg/l
5	Suspended growth ATU	15			>45	0 mg/l
6	Recirculating media filter (RMF)	20				
7	RMF with denite design	25				
8	Pretreatment with denitrification-driving compound addition	30				
9						
10	**Dispersal**	Score				
11	Gravity Distribution	0				
12	Pressurized Distribution (e.g., low pressure pipe)	5				
13	Full coverage pressurized distribution (e.g., spray, drip)	10				
14						
15	**Soil Treatment Unit Characteristics**	Score				
16	Un-nitrified effluent-> oxic STU	5				
17	Pre-nitrified effluent-> oxic STU	5				
18	Un-nitrified effluent-> oxic/anoxic STU	10				
19	Pre-nitrified effluent-> oxic/anoxic STU	10				
20						
21	**Soil Texture**	Score				
22	Coarse	0				
23	Medium	5				
24	Fine	10				
25						
26	**Vegetation**	Score				
27	No root zone dispersal	0				
28	Managed w/root zone dispersal	20				
29						
30	**Soil organic matter**	Score				
31	Insufficient	0				
32	Sufficient	10				
33						
34	TOTAL SCORE	90				
35						