Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
All	All	All	We compliment the efforts to make these rules more logically organized, more consistent usage of terminology, and clarification of some rules. It is long over-due. Vast improvement of the several decades of pieced-meal current NCDEH rules.		Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Thank you
All	All	All	The proposed rules still need to be condensed and simplified. Current rules are ~74 pages long; Proposed rules are now ~149 pages long, or a +200% increase. The fiscal note directly addresses the need to make rules more efficient, simplified, consistent, and understable, but more work needs to be done.	NCDEH rules need to specify just the minimum criteria standards to be met. Regulatory reform mandates simplicity and efficiency of administrative rules. Much in current draft could be placed in approved product references, guidelines, BMP's, or an appendix which do not have to meet threshold of administrative law procedures. The rules should specify the minimum NCDEH standards to be met, and not attempt to specifically design a system through Rules, or evaluate all sites through Rules.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	The 200 pages of rules is based on increased line spacing, as dictated by the formal rulemaking process. The final version of the rules is longer than the current version, however many new sections and rules have been added or existing rules have been separated to address the clarity issue. The rules do attempt to address the minimum criteria and then allow the private sector to propose alternatives as needed.
General			There are a lot of references in the Subsurface Dispersal System Subchapter to products approved under Section .1700. It is important to remember that “Modifications to Conventional Systems” (Large Diameter Pipe and Permeable, Porous Block Panel Systems), were not required to go through a “PIA” process, but are still viable, and in most cases, better dispersal system solutions. The language used throughout the .0900 Subchapter is very subjective towards products from the .1700 Section, and omits the applicability of LDP and PPBPS in every section outside of .0904 and .0905.		Logan Settle, T&J Panel, 10/30/2017	Agree. The language in the proposed draft has been modified to allow for all technologies to be used based on the site conditions.
General			The rules need to recognize systems, such as the peat fiber biofilter, that have a long-term record of performance within North Carolina. Puraflo has been in use in North Carolina for almost 25 years. Yet, Puraflo, as well as in-ground and mounded pad dispersal, is not recognized in 18E. At some point when systems have demonstrated decades of performance, they should become "conventional" treatment and dispersal methods in regulation. An example of this is drip irrigation. We suggest you look at the Delaware regulations that were adopted in 2014. Peat biofilters and pad dispersal methods were adopted into regulation by Delaware because of the long-term track record of performance. This needs to happen in North Carolina as well. The Delaware regulations are attached.		Colin Bishop, Anua, 10/31/2017	We understand your comments and concerns. We have reviewed the Delaware regulations and noticed that peat biofilters are addressed in a guidance document. It is our understanding that guidance documents are identical to our PIA approvals. Additionally, by not being specifically in the rules, the approval can be updated in a much easier manner than if going through the formal rulemaking process.
General			We encourage the Department to assemble a stakeholder group to look at how the regulatory community will more proactively address random system operation verification inspections and enforcement, where necessary. Oftentimes, regulations are "prescriptive heavy" in order to assure compliance. Public health and environmental protection will improve if the regulatory community becomes more involved with actual system operation.		Colin Bishop, Anua, 10/31/2017	Agree. OSWP involvement in O&M must be focused on expedient review and swift enforcement. OSWP's ability to achieve these goals is limited by our acknowledged information technology limitations. We are taking steps to rectify that via major internal initiatives. Once our data management capabilities allow us to collect and evaluate monitoring data effectively, we can more readily address operator activities. This includes disciplinary actions via appropriate channels. We welcome the opportunity to discuss the stakeholder panel idea.
All	All	All	This is our first overview of these rules with inputs of several of other parties. There are numerous other areas we feel these Rules may need updating with current standards, or can be revised, condensed, and made more efficient. We feel another draft will be forthcoming after consideration of all the inputs, and will wait for a review of the revised draft. There are many portions of these Rules that the Rules Review Commission will likely have concerns regarding authority, ambiguity, clarity, length, and rule structure.		Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree, another draft is going out for pubilc comment. We continue to work to clarify the proposed language. We are in consultation with the RRC on proposed language as we make changes.

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General			The removal of all pressure distribution requirements and sizing advantages granted to systems that utilize pressure distribution over those that utilize the gravity disposal of NSF/ANSI Standard 40 Class I treated effluent; 2. Approval of vertical separation reductions based on the quality of effluent as defined by NSF/ANSI Standard 40 Class I treatment systems, not the method of dispersal such as pressurized systems; and 3. The removal of all daily design flow (GPD) and linear footage limitations imposed on systems utilizing the gravity flow of NSF/ANSI Standard 40 Class I treated effluent above that required for pressure distribution systems; and 4. The inclusion of a definition of high strength wastewater.		Lee Rashkin, Presby Environmental, 10/31/2017	We have worked to reduce/streamline the differing limits for design daily flow and linear footage throughout the rules. However, we cannot address and make everything the same. Advanced pretreatment systems receive the greatest advantages for siting and sizing reductions. Pressure dispersal receives less than advanced pretreatment. Using both advanced pretreatment and pressure dispersal provides for the greatest sizing and siting reductions. And, we have defined high strength wastewater.
General			There exists today in the U.S. a well-established model of how residential wastewater treatment systems (RWTS), also referred to as Advanced Treatment Units (ATU), are evaluated and approved for use by regulatory agencies. This model generally includes (1) American national consensus product standards developed by technical committees, including representation and participation from North Carolina, which establish detailed, comprehensive test procedures and acceptance criteria; (2) accredited independent testing laboratories that evaluate treatment systems to those standards using specialized test facilities; (3) accredited independent certification bodies that ensure the system as tested and evaluated is the same as what is manufactured, both initially and long-term, as required of published policies and contractual terms; and (4) accreditation bodies that evaluate the standards development organizations, laboratories and certification bodies for compliance with proper procedures and criteria. It is a dynamic model, with standards and policies being reviewed and updated regularly through broad stakeholder involvement. The majority (more than 90%) of state and local regulatory agencies in the U.S. utilize all or part of the above model and associated resources to form the basis of their approval decision and product acceptance.		Bill Lloyd, Clearstream Wastewater Systems, Inc, 10/31/2017	We understand your comment and concerns. Advanced pretreatment systems in North Carolina receive reduced siting and sizing criteria based on the level of treatment provided. Based on the level of testing done at NSF, not all parameters are tested for during the NSF testing. RWTS approved under NSF-40 currently have the ability to get approval without additional testing for use in North Carolina. If an RWTS manufacturer wants their product to be used on a wider range of sites, they need to provide additional information on treatment, generally nitrogen removal. Some products have already been tested for nitrogen removal and some haven't. Additionally, the wastewater used for the NSF testing has been shown to be weak in comparison with wastewater from a single family home. Thus, the NSF testing results provide a good framework for how the system will treat the wastewater in the real world, but not sufficiently enough that no additional testing needs to be done. The draft rules do include a method for a manufacturer to reduce their sampling requirements to only field parameters based on compliant NC sampling. While we agree in concept with the idea of a web-based monitoring program, we need to first be able to internally collect, review, and manage all the data provided by advanced pretreatment systems. This allows us to enforce the rules. Once that is in place, a web-based system is the next logical step.

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General			Similarly, the majority of ATU sold at a national level in the U.S. are manufactured by companies that have demonstrated compliance with the American national consensus product standards and associated requirements of certification, including Clearstream Wastewater Systems, Inc. It is a public/private sector relationship that has helped to serve all parties, including private industry, regulatory agencies, and property owners. Based on the above, we question the value obtained from the significant, additional costs to the citizens of North Carolina when adding further requirements for demonstration of product performance, including extensive field sampling. Product performance evaluations through demonstrated compliance with American national standards, and continued compliance with the requirements of certification should meet fully the product approval requirements of North Carolina as they do for the majority of the U.S. Additional sampling and testing of systems in the field, and the requirement for approval renewals are redundant and add significant, unnecessary costs.		Bill Lloyd, Clearstream Wastewater Systems, Inc, 10/31/2017	We understand your comment and concerns. Advanced pretreatment systems in North Carolina receive reduced siting and sizing criteria based on the level of treatment provided. Based on the level of testing done at NSF, not all parameters are tested for during the NSF testing. RWTS approved under NSF-40 currently have the ability to get approval without additional testing for use in North Carolina. If an RWTS manufacturer wants their product to be used on a wider range of sites, they need to provide additional information on treatment, generally nitrogen removal. Some products have already been tested for nitrogen removal and some haven't. Additionally, the wastewater used for the NSF testing has been shown to be weak in comparison with wastewater from a single family home. Thus, the NSF testing results provide a good framework for how the system will treat the wastewater in the real world, but not sufficiently enough that no additional testing needs to be done. The draft rules do include a method for a manufacturer to reduce their sampling requirements to only field parameters based on compliant NC sampling. While we agree in concept with the idea of a web-based monitoring program, we need to first be able to internally collect, review, and manage all the data provided by advanced pretreatment systems. This allows us to enforce the rules. Once that is in place, a web-based system is the next logical step.
General			While we oppose field sampling and testing for the reasons stated, we are strong proponents for the rule requirements related to long-term RWTS/ATU operation and maintenance by North Carolina licensed maintenance entities to inspect and maintain RWTS/ATU. We support the requirements for field inspection, maintenance and monitoring of treatment systems, including immediate, automatic notification of system malfunction and verification of maintenance. There are affordable technologies available today and already in use and mandated by other regulatory agencies that provide for this valuable service. More specifically, our recommendation is that any RWTS/ATU permitted for installation in North Carolina be properly equipped to participate in the RMSYS (formerly NSF International) web-based onsite monitoring program, or such other program deemed by the Department to be equivalent, to assure that maintenance is provided for the life of the system.		Bill Lloyd, Clearstream Wastewater Systems, Inc, 10/31/2017	We understand your comment and concerns. Advanced pretreatment systems in North Carolina receive reduced siting and sizing criteria based on the level of treatment provided. Based on the level of testing done at NSF, not all parameters are tested for during the NSF testing. RWTS approved under NSF-40 currently have the ability to get approval without additional testing for use in North Carolina. If an RWTS manufacturer wants their product to be used on a wider range of sites, they need to provide additional information on treatment, generally nitrogen removal. Some products have already been tested for nitrogen removal and some haven't. Additionally, the wastewater used for the NSF testing has been shown to be weak in comparison with wastewater from a single family home. Thus, the NSF testing results provide a good framework for how the system will treat the wastewater in the real world, but not sufficiently enough that no additional testing needs to be done. The draft rules do include a method for a manufacturer to reduce their sampling requirements to only field parameters based on compliant NC sampling. While we agree in concept with the idea of a web-based monitoring program, we need to first be able to internally collect, review, and manage all the data provided by advanced pretreatment systems. This allows us to enforce the rules. Once that is in place, a web-based system is the next logical step.

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General			A recommended model is that the RWTS/ATU manufacturer provide the necessary equipment and include the cost for participation in the first two years with the price of the RWTS/ATU. After the initial two years the maintenance provider contracted to operate and maintain the system will be responsible for participation. Such a system provides (1) electronic notification and record of system malfunction, (2) electronic notification and record of required routine maintenance and inspection as well as verification of site visit and time onsite by the licensed maintenance personnel, whether routine or non-routine, and (3) an electronic record accessible by the maintenance provider, homeowner, and regulatory agency to verify proper maintenance for long-term system performance.		Bill Lloyd, Clearstream Wastewater Systems, Inc, 10/31/2017	We understand your comment and concerns. Advanced pretreatment systems in North Carolina receive reduced siting and sizing criteria based on the level of treatment provided. Based on the level of testing done at NSF, not all parameters are tested for during the NSF testing. RWTS approved under NSF-40 currently have the ability to get approval without additional testing for use in North Carolina. If an RWTS manufacturer wants their product to be used on a wider range of sites, they need to provide additional information on treatment, generally nitrogen removal. Some products have already been tested for nitrogen removal and some haven't. Additionally, the wastewater used for the NSF testing has been shown to be weak in comparison with wastewater from a single family home. Thus, the NSF testing results provide a good framework for how the system will treat the wastewater in the real world, but not sufficiently enough that no additional testing needs to be done. The draft rules do include a method for a manufacturer to reduce their sampling requirements to only field parameters based on compliant NC sampling. While we agree in concept with the idea of a web-based monitoring program, we need to first be able to internally collect, review, and manage all the data provided by advanced pretreatment systems. This allows us to enforce the rules. Once that is in place, a web-based system is the next logical step.
.0101	1	8	Define what a failure is		Steve Barry, AQWA, 10/4/2017	Disagree. With the removal of the term functioning, a failure does not need to be defined here. A failure is defined in Rule .1303.
.0101	1	8	Define what a functioning system is		Steve Barry, AQWA, 10/2/2017	Cannot adequately define, so we have removed the term functioning.
.0101	1	10 to 11	"...waters, or directly to groundwater."	"...waters, or directly to groundwater except as allowed when used in conjunction with a reclaimed water system." Do we want to be a proactive and progressive State and allow and encourage reclaimed water useage or not? North Carolina has been leaders in the allowance and oversight of advanced treatment systems. While we haven't been the most lenient, by and large systems approved and installed in this state WORK. Well technology has passed by our old prescriptive .1900 Rules. We now have the technology and institutional and undustrywide knowledge in this State to be leaders in the field of reclaimed water systems. This benefits potential property owners and the environment alike when done properly. By including this "reclaimed water" language in page 1, we set the tone right away.	Joe Soulia, Orenco Systems, 10/31/2017	Agree
.0101	1	8 to 11	Further clarify G.S. authority under "Scope" of rules.	Current draft only references definition of "wastewater system" G.S. 130A-334-(15). Need to add for reference purposes authority under: G.S. 130A-333; 334-(1h), (15); 335-(a), (b).	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree with modifications

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.0101	1	10 to 11	"...waters, or directly to groundwater."	"...waters, or directly to groundwater except as allowed when used in conjunction with a reclaimed water system." Do we want to be a proactive and progressive State and allow and encourage reclaimed water useage or not? North Carolina has been leaders in the allowance and oversight of advanced treatment systems. While we haven't been the most lenient, by and large systems approved and installed in this state WORK. Well technology has passed by our old prescriptive .1900 Rules. We now have the technology and institutional and undustrywide knowledge in this State to be leaders in the field of reclaimed water systems. This benefits potential property owners and the environment alike when done properly. By including this "reclaimed water" language in page 1, we set the tone right away.	Steve Barry, AQWA, 10/31/2017	Agree
.0102	1	18 to 19	This rule needs to address re-development of properties with pre-1977 systems. Properties with exempt systems should be encouraged to upgrade their systems to better design standards or site locations while maintaining the same daily flow and wastewater strength. Currently properties are discouraged to re-develope and upgrade their exempt waste treatment systems to better standards.	Suggested rule language: The provisions of this Subchapter shall not apply to functioning wastewater systems in use prior to July 1, 1977 or their re-development, unless the wastewater strength changes or design daily flow increases.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. We would then have to define re-development, which would complicate things even further.
.0103	1	30	Add ASTM 1227 - 13 Precast Concrete Septic Tanks		Alan Clapp, LSS, 10/24/2017	Disagree. The standards in ASTM C1227 are significantly different than the standards for concrete tanks in the current and proposed rules. There is no evidence that the current requirements do not protect public health and the environment, and no reason to significantly change the design criteria for concrete septic tanks.
.0103	1		References should not be in rules. Delete this and put into a appendix reference or BMP.	Delete references in the rules and refer to them in an appendix reference or BMP. References are subject to change that State may not agree upon or endorse, such as no State rules stricter than Federal minmum law. Will help shorten length of rules.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. This section was added at the suggestion of the RRC. If we cite a reference, we must include information on how to obtain it, non-negotiable. Adding this as a separate rule eliminates the need to reference how to obtain the document at every citation.
.0103	1		INCORPORATION BY REFERENCE	WHILE IT IS UNDERSTANDABLE TO LIST A PORTION OF THE RULES AS REFERENCED TO RECOGNIZED STANDARDS, THE CONTINUED USE CAUSES A LACK OF TRANSPARENCY DUE TO THE COST OF THE MATERIAL. RULES OF THE STATE OF NORTH CAROLINA SHOULD ATTEMPT TO BE AS TRANSPARENT AND PUBLICALLY AVAILABLE AS POSSIBLE. SUGGEST THAT THE STATE ATTEMPT TO HAVE AVAILABLE AT NO CHARGE ANY REFERENCED DOCUMENT OR STANDARD FOR MEMBERS OF THE INDUSTRY.	Doug Lassiter, NCSTA, 10/24/2017	Disagree in part. We can potentially have copies of these documents available for review assuming that RRC does not object. Some docs are copyrighted and thus would ***only*** be available for review in person. If copies were requested of other uncopyrighted documents, the State would have to charge a nominal fee.
.0104	5	6 to 25	Acronyms should be spelled out once in the rules themselves and then abbreviated within the remainder of the respective rule.	Acronyms should be spelled out once in the rules themselves and then abbreviated within the remainder of the respective rule. Put Rule .0104 acronym reference pages into appendix. Will help shorten length of rules.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. This rule was suggested by RRC during pre-review. The first reference to an acronym will spell it out and the acronym is then used exclusively. This enables the reader to go to a central location for any acronym.
.0105	All		Many definitions within this section are technical definitions that should be defined by the respective technical references cited (eg. Aggregate [Ped?], Apparent CEC, Horizon, Ksat, Lithochromic, Organic soil, Redoximorphic, Soil, etc....). Words have specific meanings. Use technical terms properly, in their proper context, and as cited by your technical references.	Only define the terms that have a specific meaning within the context of NCDEH rules. Many terms within this section are technical definitions that should be defined by their respective technical references cited within the rules (eg. Aggregate [Ped?], Apparent CEC, Horizon, Ksat, Lithochromic, Organic soil, Redoximorphic, Soil, etc....).	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Soils terms have been defined based upon appropriate technical references for the purposes of conducting soil and site evaluations across the State of North Carolina. Technical references include Brady and Wiel, USDA and NRCS guidance, etc.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0105			Definitions from G.S.-130A-334 should be included into administrative rules for legal clarity of many terms. Especially the definitions for: "Engineered Option Permit", "Site plan", "Plat", "Repair", "Wastewater", "Wastewater system", etc.	Definitions from G.S.-130A-334 should be included into administrative rules for legal clarity of many terms. Especially the definitions for: "Engineered Option Permit", "Site plan", "Plat", "Repair", "Wastewater", "Wastewater system", etc.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. RRC is very clear that statutory language should not be repeated in rule.
.0105			Add definitions for "Licensed Engineer", "Licensed Soil Scientist", "Licensed Geologist", "Plat", "Site Plan"	Add definitions for "Licensed Engineer", "Licensed Soil Scientist", "Licensed Geologist", "Plat", "Site Plan"	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. RRC is very clear that statutory language should not be repeated in rule.
.0105			The term "Aggregate", "Berm", etc……. are defined within the definitions. Where are they used within the rules??	Have the draft rules been thorougly reviewed to make sure definition terms are actually used within the rules? If a definition term is not used within the rules, then eliminate the defined term. There appears to be several of these terms that we cannot readily find within the draft rules.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree in part. The term "aggregate" is referenced 10 times total including the definition. "Berm" will be removed unless it is incorporated into another rule aside of .0105.
.0105			Need to define the term "seasonal high water table".	Suggested definition for "seasonal high water table": Saturated soils where anaerobic conditions exist for durations of ≥14 to ~21 consecutive days which is of sufficient time to form ≤2 chroma mottles within ≥2% of the soil matrix. Seasonal high water table can be determined by evidence of soil wetness indicators, direct monitoring observations, or computer modeling.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. Rule .0504 describes how the seasonal high water table is evaluated, which is defining it. We do not want to add additional languge to potentially further confuse the issue.
.0105			There are effluent pretreatment standards for TS-I, TS-II, etc. This is a good time to set rule standards for "reuse / reclaim" pretreatment which should be addressed in these rule revisions.	There are effluent pretreatment standards for TS-I, TS-II, etc. This is a good time to set rule standards for "reuse / reclaim" pretreatment which should be addressed in these rule revisions.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree
.0105			You may want to define "Surficial Aquifer" as the saturated water bearing formation, extending from the water table surface to the first confining clay layer beneath. This aquifer controls all on-site systems, once the wastewater has been dispersed into this aquifer. Knowledge of this aquifer and relationship to drains (see other definitions) defines the basis for mounding analysis.		Edwin Andrews, Edwin Andrews & Associates, PC, 10/30/2017	Disagree. We have not yet needed to define this term, so we will leave it out.
.0105	7	3	I like the Operation and Maintenance options for IIIb systems however enforcement actions must be in place for properties that do not follow requirements for inspection frequency. Also have a definition for Non-compliant system status?		Alan Clapp, LSS, 10/24/2017	Agree with concept, but trying to define a non-compliant system has proven to be very difficult.
.0105	7	3	The following terms are used in the rules and should also be defined: conjunctive use; influent; media filter; mobile food unit; reuse; and settling tank		Bill Fenner, Aquapoint, 10/29/2017	Agree with adding some of these terms in the definitions. Some are defined in other rules, such as media filter and mobile food unit. Conjunctive use and reuse are not used in the proposed draft, so they do not need to be defined.
.0105	7	3	The terms "accepted", "innovative", and "provisional" systems are not defined.	Suggest adding a definitions, with reference to G.S. 130A-343, particularly given that the terms are capitalized throughout the rule.	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Disagree . The RRC is very clear that statutory language should not be repeated in rule. These terms are defined in 130A-343.
.0105	7	5	Aggregate definition should include artificial sources as well		Bill Fenner, Aquapoint, 10/29/2017	Agree
.0105	7	5	...material (crushed rock or gravel) screened…	...material (crushed rock, gravel, or approved alternative media) screened… Tire chips still in use in areas of the State, additionally by including this language it allows for future approved materials to be used without modification to the rules.	Joe Soulia, Orenco Systems, 10/31/2017	Agree
.0105	7	5	...material (crushed rock or gravel) screened…	...material (crushed rock, gravel, or approved alternative media) screened… Tire chips still in use in areas of the State, additionally by including this language it allows for future approved materials to be used without modification to the rules.	Steve Barry, AQWA, 10/31/2017	Agree
.0105	7	11	Should say within 5' of house		Glenn Hines, 10/29/2017	Contacted Glenn Hines for clarification of comment
.0105	7	28	"Bedroom" put the NC Building Code wording here. There is no need to make folks look this up. I suggest this not apply to vacational rentals		Joe Lynn, 10/31/2017	Disagree. However, we do agree we should reference NC building code.

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.0105	7	34	Definition # 11 – Collection Sewer - includes effluent distribution lines…does this have implications later in the setbacks section for collection sewers?		Chad Gambill, Caldwell County Health Dept, 10/31/2017	A collection sewer includes a pipe that is solid and does not have holes/orifices located along the length of it to disperse effluent to the subsurface. The setbacks in Section .0600 for collection sewers are for collection sewers, not effluent distribution piping in a trench or bed.
.0105	7	34	Collection sewer and collection system are different and depending on how defined, could create conflicts with setbacks.		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. A collection sewer is the same as a collection system. To clear up any potential confusion, collection system has been added to the definition of collection sewer.
.0105	7	34	Definition of collection sewer.	Should this definition also include "sewer laterals" that run from a structure to the structure's wastewater disposal system (on-site wastewater treatment system) or collection system (sewer outfall).	John Nykamp, Guildford County Health Dept, 10/16/2017	Disagree. This is defined as a building drain and a building sewer from the Building Code. These definitions have been included in our proposed definitions.
.0105	8	19	Chambers, expanded polystyrene, and drip tubing are not described in the rules, except in the definitions.	Suggest removing dispersal media from definitions that are approved under current Rule .1969 because these products are regulated via their approvals.	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Agree with modifications
.0105	8	20	The definition of dispersal media indicates that drip tubing stores effluent flows prior to infiltration. This is false, as effluent is stored in a pump tank for a drip dispersal system.	Remove reference to drip tubing or amend definition of dispersal media to make it clear that drip tubing does not store effluent.	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Agree
.0105	8	26	Effluent is used in the rules in ways not consistent with this definition. Recommend revising the definition as follows: "Effluent" means the liquid discharge from a treatment tank or component.		Bill Fenner, Aquapoint, 10/29/2017	Disagree. Pretreatment is defined in G.S. 130A-334(7b). Have included the reference in the definition and verified all uses of effluent are correct.
.0105	8	26	(21) Effluent – means the liquid discharge from a primary treatment or a pretreatment component.	(Add primary treatment since the septic tank definition does not indicate it is “pretreatment”.)	Len Gilstrap, Carteret LHD, 10/31/2017	Disagree. Pretreatment is defined in G.S. 130A-334(7b). Have included the reference in the definition effluent.
.0105	8	34	More clearly define "full kitchen"		Bert Gibson, Alexander LHD, 9/5/2017	Have defined full kitchen to align with NC Food Code.
.0105	8	34	full Kitchen needs to be rewritten to make clear what “equiptment” means such as 3 compartment sink, dishwasher, commercial refrigerator, stove etc.		Joe Lynn, 10/31/2017	Have defined full kitchen to align with NC Food Code.
.0105	9	10	Include certified installer and certified contractor in the definition of installer		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. The system may be installed by the homeowner who is "authorized" by statute and rule, or by a contractor who is "certified" by the NCOWCICB. Thus, the broader term "installer" is appropriate.
.0105	9	34	“Infiltrative surface” means the designated interface where effluent moves from dispersal media or a distribution device into treatment media, naturally occurring soil, or fill. The definition of "long term acceptance rate" does not include fill at the beginning of line 34, but it should.	Propose following change: (41) “Long Term Acceptance Rate,” referred to as LTAR, means the rate of effluent absorption by the soil<u>, fill,</u> or saprolite in a wastewater system after long-term use.	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Agree
.0105	9	19 to 22	Last sentence in "Ksat" definition needs to be modified.	Last sentence in "Ksat" definition needs to be modified too: <u>Results of in-situ Ksat are used to simulate a rate of effluent movement through the soil and may be used in calculating a design long-term application rate for wastewater dispersal.</u>	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. All technical literature agrees that KSAT can be used to confirm LTAR, but not determine LTAR.

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.0105	9	23 to 25	Definition of "Lateral water movement" needs modification.	Modify definition too: ….means the horizontal movement of subsurface water typically associated with a more permeable soil layer over a restrictive or less permeable soil layer." Lastly, what is the purpose of the last sentence in the definition, and how can short-term observations of water in a hole or well differeniate between a perched, apparent, or ponded soil wetness condition?? Suggest deleting last sentence within this definition.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. What is described in the comment language is not always the case. The definition was intended to be inclusive. This definition closely mirrors the definition in the current rules, which includes the last sentence. The current definition has not caused any interpretation issues, so we will keep our proposed language.
.0105	9	28 to 30	(39) – Limiting Condition – use of term throughout the rules is not always consistent with definition.	For example: .0909 (c)(1 and 2) (pg. 86) Definition for limiting condition (.0105(39)) includes soil wetness condition. .0901(1) states "trenches shall be installed with 24" separating the infiltrative surface and any limiting condition." .0901(2) states "trenches shall be installed with 18 inches separating the infiltrative surface and any soil wetness condition." The limiting condition definition should not include soil wetness if soil wetness will be separated out, as in the above section.	Len Gilstrap, Carteret LHD, 10/31/2017	Agree and have removed wetness from limiting condition definition. We have also chekced all references to limiting condition to verify that the correct terminology is used.
.0105	9	33 to 37	Modify "Long term acceptance rate" definition.	Modify "long term acceptance rate" definition too: ……means the design rate of effluent absorption by the soil from a wastewater dispersal system after long-term use. ……..is assigned based upon soil textural class, structure, consistence, mineralogy, depth, percentage coarse rock, ~~landscape position, topography~~, system type, or calculated from on-site test data, and is used to determine the dispersal field sizing requirements……..	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. Landscape position and topography need to be evaluated when assigning the LTAR. Further, adding the word "design" to line 33 does not add clarity.
.0105	10	3	In this definition do we mean public management entity with a certified operator? LLC incorporation?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Yes.
.0105	10	14	Stated definition of "Matrix" refers to volume of a soil horizon. Soil matrix typically refers to a percentage area of the horizon being evaluated, not volume. Confusing.	Rewrite "Matrix" definition to: ……means dominant percentage area (>50%) of a soil parameter being evaluated. Soil matrix parameters typcially evaluated are soil color, mottles, structure, concretions, pores, cracks, roots, etc.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. The definition in the proposed rules is very similar to the current rules. The current definition has not caused any interpretation issues, so we will keep our proposed language as is. There are no good standard definitions of matrix from known soil science references.
.0105	10	22		Mottle means a color (OR, an area of soil with munsell color) differing from the matrix color of a soil horizon	Connie Adams, Caldwell LHD, 10/31/2017	Understand comment, but the current language has not caused any interpretation issues, so we will stay with this language.
.0105	10	35	Definition of off-site should include a single lot which is continuous but joined by a narrow portion of land separating wastewater system and facility it serves		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree - what is described in the comment is a single ***continuous*** lot.
.0105	10	35 to 36	The definition of off-site system given here is quite expansive and appears to include anything from a drainfield that crosses 10' over onto a neighbor's property to a system with a 1 mile supply line to a common area with 10 drainfields on it. Further on in the rules there are requirements that off-site systems have multi-party agreements (.0204 (f);p18 line 20) and a certified operator to maintain the system (page 113 Table XXXI). These requirements are reasonable for the latter situation, but not for the former. There is a need to distinguish within the rules between 1) offsite systems with small encroachments that are within sight or adjacent to the facility's location and 2) remote situations that are likely to be unattended and unnoticed if special effort is not made to establish a responsible party.	I suggest something like the following: "Local off-site system means a wastewater system where all or part of the drainfield is located on an adjacent property to the lot the facility is located on. Local off-site systems shall not be further than 100 feet (or some reasonable number) from the common property line." (or something like that) "Remote offsite system means a wastewater system where all or some system components are located on property that is not adjacent to the lot the facility is located on or is more than 100 feet from a common property line of an adjacent property. Remote systems are often located in clusters on common property areas and do not have an obvious party that has responsibility for maintaining the site and observing the system for proper function."	Connie Adams, Caldwell LHD, 10/31/2017	Agree and will clarify in the proposed rules that a single off-site system does not need a multi-party agreement or operator.
.0105	11	8	Definition of partent material "the disintegrated rock material usually unconsolidated and unchanged or only slightly changed that underlies and generally gives rise to the true soil by the natural process of soil development - called also source material - definition from Webster . . clearer?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Proposed defintion not clearer, but will modify current definition.
.0105	11	8 to 9		"parent material" means the mineral matter that is. . . or by decomposition of rock and has not gone through soil forming processes.	Connie Adams, Caldwell LHD, 10/31/2017	Agree

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0105	11	12	There is reference to "perched water table". Just a technicality, I don't believe there are perched water table aquifers in North Carolina. Perched Water Table is generally a permanent feature with an aquifer underlain by unsaturated zones and a second aquifer deeper (Arizona hydrology). The rechnical term for what is labeled perched water table, should be temporary water table, which sometimes dries or drains to a lwer surficial aquifer, typically seasonal in North Carolina. I understand that for all practical purposes, most people in North Carolina refer to temporary water tables as perced water tables, therefore you may want to leave as is.		Edwin Andrews, Edwin Andrews & Associates, PC, 10/30/2017	Agree that we will leave as is.
.0105	11	22	Needs line break/new paragraph between definition (49) and "(48) 'public management entity'"	Add line break/new paragraph between two definitions. AD: line break	Lee Rashkin, Presby Environmental, 10/31/2017	Agree
.0105	11	22	Public management entity should be (50), not (49)	Re-number in accordance with public management entity's new number 50. CH: numbering of definitions	Lee Rashkin, Presby Environmental, 10/31/2017	Agree
.0105	11	22	Re-number (50) Redoximorphic features to (51) and so on	Re-number all remaining definitions to be in line with "public management entity"'s new number 50. CH: numbering of definitions.	Lee Rashkin, Presby Environmental, 10/31/2017	Agree
.0105	11	29 to 32	Is the term "Redoximorphic" used within the rules? If not, then no need to define it.	Is the term "Redoximorphic" used within the rules? If not, then no need to define it.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. The term redoximorphic is used within the rules, not just in definitions.
.0105	11	33	Repair area definition	Make terminology "replacement repair area" means an area that has been classified suitable consistent with the rules in this subchapter. The replacement repair area is reserved for the extension, alteration, wastewater system relocation, or repair replacement of part or all of the initial wastewater system. The replacement repair area shall be available to be used in the event of a malfunction or if a wastewater system is partially or totally destroyed.	Doug Lassiter, NCSTA, 10/2/2017	Disagree. Adding the word replacement does not clarify this term anymore than the proposed defintion does.
.0105	12	4 to 12	Restrictive horizon within these rules is used as a parameter for site usability or unstuitability. Restrictive horizon needs a quantifier, not just a subjective or prescriptive qualifier, otherwise the definition is meaningless. Most subsoil horizons are capable of perching vertical water flow but at a rate that is still usable (eg. an arenic subsurface over a Bt horizon). Restrictive horizon needs a quantifier to define if the soil horizon is truly limiting or restrictive.	Restrictive horizon needs a quantifier such as <0.02 gal/day/sqft = <0.0013 in/hr. The NCDEQ 2T rules recognize <1 x 10-6 cm/sec = 0.0014 in/hr as restrictive permeability of pond liners. If sufficient area is provided even sites with a restrictive horizon could be utilized.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Diagree. The previous research never addressed the permeability of these horizons. To our knowledge, no further research has been done to address the permeability of these horizons. What we have is currently working and has not caused any interpretation problems. Consultants are always welcome to propose designs under .1948(d) or new .0509(f) on a site-specific basis.
.0105	12	13	Definition of rock - the upper boundary of rock is saprolite, soil, or the land surface, in some cases water?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. The upper boundary of rock does not include water.
.0105	12	20	Needs to have structurally sound added back into the defintion.		ABCD Construction, 9/14/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Andrew Daywalt, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Ben Hildreth, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Brian Beebe, 10/23/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Cable Septic and Backhoe Service, 10/23/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Charles Dodge, C&C Septic Services, 9/25/2017	Agree

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.0105	12	20	Needs to have structurally sound added back into the defintion.		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Charles Driggers, Driggers Septic Tank, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Charlie Brice, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Chris Hedrick, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Chriscoe Bacchoe Service, 10/23/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Daniel Newsome, D&D Organic Farming, 10/24/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Danny Dennis, 10/23/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		David Murphy, DRM, 10/24/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Donald Martin, 10/23/2017	Agree
.0105	12	20	"SEPTIC TANK" MEANS A WATERTIGHT, COVERED RECEPTACLE… . THIS DEFINITION IS INCOMPLETE.	"SEPTIC TANK" MEANS A WATERTIGHT RECEPTACLE CONSTRUCTED OR MANUFACTURED TO WITHSTAND A MINIMUM OF 300 PSF IN ADDITION TO ALL LOADS THAT MAY BE PRESENT IN AN UNDRGROUND STRUCTURE, AND USED FOR THE COLLECTION AND TREATMENT OF WASTEWATER. OMIT "COVERED" SINCE WATERTIGHT STRUCTURES IMPLY COVERED.	Doug Lassiter, NCSTA, 10/24/2017	Agree
.0105	12	20	Septic tank was once defined as watertight and structurally sound. This has disappeared for no apparent reason and should be added back into the definition.	Add back language	Doug Lassiter, NCSTA, 9/20/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Garland Walker, 10/23/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Gerald Leonard, 10/23/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Hank Hill Grading, 10/23/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Harry Hatcher, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Jeff Link, Rowan, LHD, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Jerry Pearce, 9/15/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Johnny Strickland, 10/23/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Kearns Pumping Service, 10/23/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Keith Blackburn, B & C Concrete, 9/20/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Kippy Blanks, 9/28/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Larry Beam, 9/23/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Lawrence Henning, 9/15/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Lester Breedlove, 10/23/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Mark Johnson, 10/23/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Marty Maness, 10/23/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Agree

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.0105	12	20	Needs to have structurally sound added back into the defintion.		Michael Barger, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Parrish Homes and Pools,Inc, 10/23/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Pat Rentz, VIP Inspection Services, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Perry's Grading & Septic Service, 9/14/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Randy Lackey, Love Valley Septic, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Ronnie Burgin, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Russell C. Trodgon, 9/18/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Russell Lineberry, 10/23/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Sterlin Church, Church's Backhoe Service, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Steve Cannon, Rowan LHD, 9/25/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Terry Maples, 10/23/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		TM Grading, Inc, 10/23/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Tyler Jolley, 9/15/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Valentina Oxendine, 10/23/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Vince Scroggins, 9/14/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Agree
.0105	12	20	Needs to have structurally sound added back into the defintion.		Willilam Garrison, EcoClean Septic, 9/25/2017	Agree
.0105	12	27	"Sequencial distribution" (explain proximal end(suggest) means the distribution method in which effluent is loaded into one trench and fills it to a predermined level before passing through a device (drop box) to the succeeding trench at a lower elevation.		Joe Lynn, 10/31/2017	Agree
.0105	12	32	"Serial distribution" (substitute some other wording for single uninterrupted flow path)(suggest) means the distribution method in which effluent is loaded into one trench and fills it to a predermined level before passing through an approved pipe to the succeeding trench at a lower elevation.		Joe Lynn, 10/31/2017	Agree with modifications
.0105	12	35 to 36	Definition of "Soil" first sentence should be modified. May want to further review SSSA or NRCS definitions of soil to be technically correct.	Change too: .....means the naturally occurring body of unconsolidated ~~porous~~ mineral and organic materials on the land surface.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree
.0105	13	15 to 18	Per the "Methodology for Identification of Intermittent and Perennial Streams and their Origins", 2010 version, which I suspect is the source for these terms, "ephemeral streams" primarily carry stormwater runoff and only run for a short time after major precipitation events (pg 5 of the manual). Is it your intention to expand the definition of a stream this way? In the past I understood stream to mean a water way that carried water >50% of the time from Nov to April.	"This includes intermittent and perennial streams as defined by DEQ. . ." (suggest dropping ephemeral streams--currently they are not subject to these setbacks. Since they are above water table and carry water for a short time, the 50' setback is not needed.) OR make sure the setbacks in Table IX accurately reflect the difference in function between ephemeral and intermittent/perennial streams.	Connie Adams, Caldwell LHD, 10/31/2017	Agree and have revised the table accordingly

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0105	13	15 to 18	"Stream" definition should not include ephemeral channels which should only be considered in landscape position limitations.	Stream definition should not include ephemeral channels which should only be considered in landscape position limitations. Stream should have a readily observable water level, bed/bank conditions, or ordinary high water mark.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. Ephemeral streams are one category of streams and we need to evaluate their location on the site. Ephemeral streams constitute a depressional feature that has to be considered in siting a wastewater system. We have better clarified the separation of the different categories of streams in Section .0600.
.0105	13	19 to 20	Need to expand definition of "Suitable".	Suggested definition of "Suitable": means classification of a specific site evaluation parameter or the site. A site is classified as suitable for a wastewater system when all site evaluation parameters are either suitable or can be overcome with allowable system and/or site improvements.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree with modifications
.0105	13	21 to 24	Need to include the previously defined term "berm" within the definition of "surface water diversion" as a type of diversion.	Need to include the previously defined term "berm" within the definition of "surface water diversion" as a type of diversion.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree
.0105	13	23	Interceptor drains and foundation drains are not surface water diversions--they are listed separately under artificial drainage definition and so are already covered by the law	"Surface water diversions include waterways, swales and ditches."	Connie Adams, Caldwell LHD, 10/31/2017	Agree
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		ABCD Construction, 9/14/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Andrew Daywalt, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Ben Hildreth, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Brian Beebe, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Cable Septic and Backhoe Service, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Charles Dodge, C&C Septic Services, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Charles Driggers, Driggers Septic Tank, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Charlie Brice, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Chris Hedrick, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Chriscoe Bacchoe Service, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Daniel Newsome, D&D Organic Farming, 10/24/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Danny Dennis, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		David Murphy, DRM, 10/24/2017	Agree with spirit but not location. This information is included in Rule .1711.

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.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Donald Martin, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	"THIRD PARTY" REVIEW SHOULD NOT BE LEFT SOLELY AS A REPORT FROM AN OUTSIDE PARTY.	ADD TO THE END OF THE DEFINITION: THE DEPARTMENT SHALL BE NOTIFIED OF ALL SAMPLING AND TEST DATA WITHIN 30 DAYS OF THE TESTING BY THE THIRD PARTY AND SHALL REVIEW THE ANNUAL REPORT FOR COMPLIANCE WITH EXISTING RULES. THE DEPARTMENT MAY SUSPEND AN APPROVAL IF TESTING OR EVALUATION FAILS TO MEET MINIMUM STANDARDS WITHIN THESE RULES UNTIL SUCH TIME AS SUBSEQUENT REPORTS ARE REVIEWED.	Doug Lassiter, NCSTA, 10/24/2017	Agree with information in this comment. It has been included in rules in Section .1300 and .1700.
.0105	13	32	The question of third parties and third party reports that are prepared to fulfill requirements of laws or rules have been constantly addresses. It's a fine line between independence and relationalships that cloud the abiity of the person to fufull their obligation. If the proposed rules are installed into permanent rules, the Department should write into the rules the ability to review the third paty report and be informed of all the testing, sampling, and evaluations, not just the ones entered into the report.	Add suggested language to definition "The Department shall be notified all sampling and test data withing 30 days of the testing by the Third Party and shall review the Annuyal Report for compliance with existing rules. The Department may suspend an approval if testing or evaluation fails to meet minimum standards within these rules until such time as subsequent reports are reviewed."	Doug Lassiter, NCSTA, 9/20/2017	Agree with information in this comment. It has been included in rules in Section .1300 and .1700.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Garland Walker, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Gerald Leonard, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Hank Hill Grading, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Harry Hatcher, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Jeff Link, Rowan, LHD, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Jerry Pearce, 9/15/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Johnny Strickland, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Kearns Pumping Service, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Keith Blackburn, B & C Concrete, 9/20/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Kippy Blanks, 9/28/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Larry Beam, 9/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Lawrence Henning, 9/15/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Lester Breedlove, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Mark Johnson, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Marty Maness, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.

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.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Michael Barger, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Parrish Homes and Pools,Inc, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Pat Rentz, VIP Inspection Services, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Perry's Grading & Septic Service, 9/14/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Randy Lackey, Love Valley Septic, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Ronnie Burgin, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Russell C. Trodgon, 9/18/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Russell Lineberry, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Sterlin Church, Church's Backhoe Service, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Steve Cannon, Rowan LHD, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Terry Maples, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		TM Grading, Inc, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Tyler Jolley, 9/15/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Valentina Oxendine, 10/23/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Vince Scroggins, 9/14/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32	Add the following language - " The Department may oversee the report for accuracy."		Willilam Garrison, EcoClean Septic, 9/25/2017	Agree with spirit but not location. This information is included in Rule .1711.
.0105	13	32 to 35	Within definition of "Third-party" need to change the term "body" to "responsible entity". Expand meaning of last sentence.	Within definition of "Third-party" need to change the term "body" to "responsible entity". Expand meaning of last sentence too: "The third-party person or responsible enity has knowledge of the subject area based upon relevant education, training, experience, and any required registration, certification, or licensing."	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree in part. Will change "body" to "entity".
.0105	14	5	“Unstable slopes” use definition from geologic survey		Joe Lynn, 10/31/2017	We are unable to find this defintion with the geologic survey.
.0105	14	6	the word "UNSUITABLE" is used throughout - why is it in all caps, and should there be a definition associated with it?	Define unsuitable and perhaps remove it from all caps. CH: un-capitalize, define.	Lee Rashkin, Presby Environmental, 10/31/2017	Agree

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.0105	14	6 to 7	Need to modify definition of "Unsuitable".	Modify last sentence within definition too: ……. A site is classified unsuitable for a wastewater system when any one site evaluation parameter is unsuitable that cannot be overcome by system type, site improvements, or acceptable on-site testing.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. Our goal in eliminating the provisionally suitable classification was to eliminate a needless step in soil site evaluation. Thus, our proposed definition of unsuitable means that we have reached the end of the road for LHD and OSWP options. This classification does not preclude the owner hiring a licensed consultant to evaluate the site and propose how to overcome the limiting condition.
.0105	14	8 to 9	Need to clarify definition of "Vertical separation distance".	Modify too: …..means the vertical measurement from an infiltrative surface of the waste treatment system dispersal field to a limiting site condition.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree
.0105	14	10	More clearly define "warming kitchen"		Bert Gibson, Alexander LHD, 9/5/2017	Have defined warming kitchen to better align with NC Food Code.
.0105	14	10	The term "wastewater system" is used throughout the draft rules, but is not defined.	Suggest adding a definition, given the large number of references in the rule.	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Disagree. This is a statutory definition and cannot be repeated in rule. G.S. 130A-334(15)
.0105	14	10	Questions on definition of warming kitchen. Break room kitchen? All or any of after "includes only"? Domestic level only, dishwasher (no commercial dishwasher) or one sink, one stove/200 people is the way to define this?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Have defined warming kitchen to better align with NC Food Code.
.0105	14	10 to 12	What is the difference between a "warming kitchen" and an undefined "kitchen"?? Is this definintion needed?	What is the difference between a "warming kitchen" and an undefined "kitchen"?? Is this definintion needed?	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Have defined warming kitchen to better align with NC Food Code. And, yes, this definition is needed. We are trying to establish when a facility needs a grease trap, the LTAR is the mean, and no reduction is allowed in the drainfield.
.0201	14	21	controlling facility containing / First example of other errors in grammar/Regulations need to be reviewed by a English language-grammar expert	Review and Correct grammar problems throughout. Makes reviewing difficult! ADD/CH: Example: add an "a" in the first sentence "any person owning or controlling A facility containing water-using..."	Lee Rashkin, Presby Environmental, 10/31/2017	Agree
.0201	14	22	Second line owner should say installer		Glenn Hines, 10/29/2017	Disagree. This is intended to focus on the owner or their authorized representative. The installer may occasionally serve in this capacity but it cannot be limited to only the installer.
.0201	14	26 to 28	Based on this language, when the authorized agent determined that the installation meets the requirements of the IP and CA, the OP is issued.	This is the most proper route, however it does not give the LHD the authority to reconsider the first agent's permit conditions and installation instructions, if the second agent feels the permit doesn't comply with rules of the State. Keep this sentence structure and amend the language in .0205(f) as proposed.	Doug Lassiter, NCSTA, 10/2/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0201	14	28	Or a combination of PE, LSS, or LG		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree. The "or" implies any combination of these folks as well.
.0201	14	28 to 30	Need sentence at end of this General permitting paragraph that an Engineered Option Permit is also available to the applicant with proper reference to Section .0207 .	Need sentence at end of this General permitting paragraph that an Engineered Option Permit is also available to the applicant with proper reference to Section .0207 .	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree.
.0202	14	35	Title of Section should be "Application Directly to NCDEH" for clarity.	Title of Section should be "Application Directly to NCDEH" for clarity.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. With the addition of a sentence in Rule .0201 regarding the option of EOP we do not need to identify this rule as permitting by the LHD. That is already implied.
.0202	14	36	Sentence placement is odd - should it be a (number) or (letter) or refer to (c) in line 11 or (2) in line 20?	Label/indent line so it is clear what subsection the section refers to. CH: move or label sentence.	Lee Rashkin, Presby Environmental, 10/31/2017	Agree

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.0202	15	3	(c) needs to be eliminated because applications should not expire		ABCD Construction, 9/14/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Andrew Daywalt, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Ben Hildreth, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.

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.0202	15	3	(c) needs to be eliminated because applications should not expire		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Brian Beebe, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Cable Septic and Backhoe Service, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.

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.0202	15	3	(c) needs to be eliminated because applications should not expire		Charles Dodge, C&C Septic Services, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Charles Driggers, Driggers Septic Tank, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Charlie Brice, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.

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.0202	15	3	(c) needs to be eliminated because applications should not expire		Chris Hedrick, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Chriscoe Bacchoe Service, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Daniel Newsome, D&D Organic Farming, 10/24/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.

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.0202	15	3	(c) needs to be eliminated because applications should not expire		Danny Dennis, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		David Murphy, DRM, 10/24/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.

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.0202	15	3	(c) needs to be eliminated because applications should not expire		Donald Martin, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	A "COMPLETE" APPLICATION FOR AN IP CA OR EXISTING SYSTEM AUTHORIZATION SHOULD NOT EXPIRE 12 MONTHS AFTER DATE OF APPLICATION.	OMIT THIS SENTENCE. ACCORDING TO THE CURRENT RULES, UPON RECEIPT OF A "COMPLETE" APPLICATION, THE LHD SHALL ACT ON THE APPLICATION.	Doug Lassiter, NCSTA, 10/24/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	Unneecessary and burdensome: In proposed 15A NCAC 18E .0203(a) - Upon receipt of a complete application for an IP, an authorized agend shall evaluate the site to determine whether the site is suitable…. This correctly indicates that the LHD, upon receipt of a complete application will act on it accordingly. The owner would not turn in a complete application unless they wanted action on it. And if the LHD were not to be able to act on a complete application in a 12 month window, this should not be cause for the application to expire.	Eliminate (c)	Doug Lassiter, NCSTA, 9/20/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.

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.0202	15	3	(c) needs to be eliminated because applications should not expire		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Garland Walker, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Gerald Leonard, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	expire 5 years not expire 12 months		Glenn Hines, 10/29/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.

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.0202	15	3	(c) needs to be eliminated because applications should not expire		Hank Hill Grading, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Harry Hatcher, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	Wake County fully supports a complete application expiring 12 months from the date of application.		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Thank you
.0202	15	3	(c) needs to be eliminated because applications should not expire		Jeff Link, Rowan, LHD, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.

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.0202	15	3	(c) needs to be eliminated because applications should not expire		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Jerry Pearce, 9/15/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Johnny Strickland, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Kearns Pumping Service, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.

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.0202	15	3	(c) needs to be eliminated because applications should not expire		Keith Blackburn, B & C Concrete, 9/20/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Kippy Blanks, 9/28/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Larry Beam, 9/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Lawrence Henning, 9/15/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.

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.0202	15	3	IP, CA, Existing System application expire after 12 months. Good addition to the rules because there are times when the owner does not complete the requirements (I.e. site specific study, easements, requests for visits from regional specialists, and in support of .0509(c)) in a denial letter to obtain the IP or the CA. Sometimes its years down the road. Without an expiration date, the original application can still be used in response to the denial letter and conditions. An expired application would require a new application be made.		Len Gilstrap, Carteret LHD, 10/31/2017	Thank you
.0202	15	3	Fully support 12 month application expiration. The application is acted on by the LHD. When the application is denied, the application is still there and the applicant can come back and act on it again, which allows an unlimited amount of time to act on a denied application. This eliminates that unlimited time.		Len Gilstrap, Carteret LHD, 9/20/2017	Thank you
.0202	15	3	(c) needs to be eliminated because applications should not expire		Lester Breedlove, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Mark Johnson, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Marty Maness, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.

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.0202	15	3	(c) needs to be eliminated because applications should not expire		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Michael Barger, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.

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.0202	15	3	A complete Application should be without expiration.		Mike Stidham, E-Z Treat, 10/31/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) A complete application for an IP, CA, or Existing System Authorization shall expire 12 months from the date of application.	Delete. A complete application should receive the attention of the LHD in the issuance of the permit. Having a 12 month window and making the owner or developer reapply for a permit is unnecessary and burdensome.	NC Home Builders Assn, 10/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Parrish Homes and Pools,Inc, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Pat Rentz, VIP Inspection Services, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.

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.0202	15	3	(c) needs to be eliminated because applications should not expire		Perry's Grading & Septic Service, 9/14/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Randy Lackey, Love Valley Septic, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.

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.0202	15	3	(c) needs to be eliminated because applications should not expire		Ronnie Burgin, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	This is not necessary. Upon a completed application being received by the local health department, the local health departments is supposed to act on the application, as it says on page 16, line 20. If it's a complete application, it should not have an expiration date since the next step of action is in the hands of the local health department.	Eliminate (c)	Russ Ayers, Bennie Moore Septic Tank, 9/20/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Russell C. Trodgon, 9/18/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Russell Lineberry, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.

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.0202	15	3	(c) needs to be eliminated because applications should not expire		Sterlin Church, Church's Backhoe Service, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Steve Cannon, Rowan LHD, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Terry Maples, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		TM Grading, Inc, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.

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.0202	15	3	(c) needs to be eliminated because applications should not expire		Tyler Jolley, 9/15/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Valentina Oxendine, 10/23/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Vince Scroggins, 9/14/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.

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.0202	15	3	(c) needs to be eliminated because applications should not expire		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	3	(c) needs to be eliminated because applications should not expire		Willilam Garrison, EcoClean Septic, 9/25/2017	Disagree. G.S. 130A-336(d) sets the time frame for a LHD to issue or deny improvement permits after receiving a complete application (60 days for a conventional or accepted system, 90 days for a provisional or innovative system). An application expires when there is pending action required by the owner/applicant, such as providing backhoe pits, adequately marking the property, underbrushing as necessary, or rectifying other site conditions which prevent completion of the evaluation and issuance or denial of a permit during the first visit(s) to the site. The LHD has completed as much of the soil and site evaluation as possible and cannot continue the evaluation until the owner has completed the identified items.
.0202	15	8	installer name not owner name		Glenn Hines, 10/29/2017	Disagree. This is intended to focus on the owner or their authorized representative. The installer may occasionally serve in this capacity but it cannot be limited to only the installer.
.0202	15	9 to 13	Other possible types of permits one might apply for include repair and system redesign for a CA.		Connie Adams, Caldwell LHD, 10/31/2017	Agree with concept, however system re-design is not defined and can cover many scenarios, and the application for service and paperwork needed must be assessed on a case-by-case basis. We are going to leave the language as currently proposed.
.0202	15	26	(e) (7) – Insert “and” in place of “or” on line 26. The number of bedrooms and the number of occupants are required on the application.		Len Gilstrap, Carteret LHD, 10/31/2017	Agree with modifications
.0202	15	26	Should state number of bedrooms and number of occupants, not or		Len Gilstrap, Carteret LHD, 9/20/2017	Agree with modifications
.0202	15	34	Are we going to accept applications with signature of the owners legal representative…if so does legal representative need to be defined? Please don’t use the term “owners authorized agent” due to the confusion this causes with term “authorized agent” being used for EHSs and real-estate agents.		Chad Gambill, Caldwell County Health Dept, 10/31/2017	Agree. See definition of owner.
.0202	15	34	Provision for an agent to act for the owner is needed.	"Signature of owner or person authorized to act on owners behalf"	Connie Adams, Caldwell LHD, 10/31/2017	Disagree. See definition of owner.
.0202	15	34	installer signature not owner		Glenn Hines, 10/29/2017	Disagree. This is intended to focus on the owner or their authorized representative. The installer may occasionally serve in this capacity but it cannot be limited to only the installer.
.0202	15	37	Delete the words garbage disposal		ABCD Construction, 9/14/2017	Agree
.0202	15	37	Delete the words garbage disposal		Andrew Daywalt, 9/25/2017	Agree
.0202	15	37	Delete the words garbage disposal		Ben Hildreth, 9/25/2017	Agree
.0202	15	37	Delete the words garbage disposal		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Agree

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.0202	15	37	Delete the words garbage disposal		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Agree
.0202	15	37	Delete the words garbage disposal		Brian Beebe, 10/23/2017	Agree
.0202	15	37	Delete the words garbage disposal		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Agree
.0202	15	37	Delete the words garbage disposal		Cable Septic and Backhoe Service, 10/23/2017	Agree
.0202	15	37	Delete the words garbage disposal		Charles Dodge, C&C Septic Services, 9/25/2017	Agree
.0202	15	37	Delete the words garbage disposal		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Agree
.0202	15	37	Delete the words garbage disposal		Charles Driggers, Driggers Septic Tank, 9/25/2017	Agree
.0202	15	37	Delete the words garbage disposal		Charlie Brice, 9/25/2017	Agree
.0202	15	37	Delete the words garbage disposal		Chris Hedrick, 9/25/2017	Agree
.0202	15	37	Delete the words garbage disposal		Chriscoe Bacchoe Service, 10/23/2017	Agree
.0202	15	37	Delete the words garbage disposal		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Agree
.0202	15	37	Delete the words garbage disposal		Daniel Newsome, D&D Organic Farming, 10/24/2017	Agree
.0202	15	37	Delete the words garbage disposal		Danny Dennis, 10/23/2017	Agree
.0202	15	37	Delete the words garbage disposal		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Agree
.0202	15	37	Delete the words garbage disposal		David Murphy, DRM, 10/24/2017	Agree
.0202	15	37	Delete the words garbage disposal		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Agree
.0202	15	37	Delete the words garbage disposal		Donald Martin, 10/23/2017	Agree
.0202	15	37	INTRODUCTION OF A CHECK-OFF FOR A GARBAGE DISPOSAL IS UNWARRANTED. WHILE GARBAGE DISPOSALS ARE RECOGNIZED FOR INTRODUCTION OF UNDIGESTED SOLIDS INTO THE SEPTIC TANK, IT CANNOT BE DETERMINED AS TO HOW MUCH THE DEVICE IS USED OR IF THE GARBAGE DISPOSAL WILL BE INCLUDED OR NOT INCLUDED.	OMIT THE CHECK-OFF FOR GARBAGE DISPOSALS. THIS IS A MATTER OF INCREASED MAINTENANCED, NOT TANK CAPACITY.	Doug Lassiter, NCSTA, 10/24/2017	Agree
.0202	15	37	This inclusion of a garbage disposal in the household is noted for action here and on page 63 where the proposal calls for an increase in the size of the septic tank. This potentional increase in solids (which is a matter of use of the garbage disposal) is a matter of increased maintenance more tha it is increase size capacity. This additional information is unnecessary.	Eliminate	Doug Lassiter, NCSTA, 9/20/2017	Agree
.0202	15	37	Delete the words garbage disposal		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Agree
.0202	15	37	Delete the words garbage disposal		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Agree
.0202	15	37	Delete the words garbage disposal		Garland Walker, 10/23/2017	Agree
.0202	15	37	Delete the words garbage disposal		Gerald Leonard, 10/23/2017	Agree
.0202	15	37	Delete the words garbage disposal		Hank Hill Grading, 10/23/2017	Agree
.0202	15	37	Delete the words garbage disposal		Harry Hatcher, 9/25/2017	Agree
.0202	15	37	Determination if there is a garbage disposal could be difficult to figure out.		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree

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.0202	15	37	Besides listing "sewage pump" should "solids handling pump" also be included?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. In our world, a sewage pump is also a solids handling pump. Sewage is defined in G.S. 130A-334(13) as both the liquid and solid human body waste . . ."
.0202	15	37	Delete the words garbage disposal		Jeff Link, Rowan, LHD, 9/25/2017	Agree
.0202	15	37	Delete the words garbage disposal		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Agree
.0202	15	37	Delete the words garbage disposal		Jerry Pearce, 9/15/2017	Agree
.0202	15	37	Delete the words garbage disposal		Johnny Strickland, 10/23/2017	Agree
.0202	15	37	Delete the words garbage disposal		Kearns Pumping Service, 10/23/2017	Agree
.0202	15	37	Delete the words garbage disposal		Keith Blackburn, B & C Concrete, 9/20/2017	Agree
.0202	15	37	Delete the words garbage disposal		Larry Beam, 9/23/2017	Agree
.0202	15	37	Delete the words garbage disposal		Lawrence Henning, 9/15/2017	Agree
.0202	15	37	Delete the words garbage disposal		Lester Breedlove, 10/23/2017	Agree
.0202	15	37	Delete the words garbage disposal		Mark Johnson, 10/23/2017	Agree
.0202	15	37	Delete the words garbage disposal		Marty Maness, 10/23/2017	Agree
.0202	15	37	Delete the words garbage disposal		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Agree
.0202	15	37	Delete the words garbage disposal		Michael Barger, 9/25/2017	Agree
.0202	15	37	Delete the words garbage disposal		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Agree
.0202	15	37	Delete the words garbage disposal		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Agree
.0202	15	37	Eliminate in (2) "garbage disposal"	This inclusion of the garbage disposal in the household isn oted for action here and on page 63 where the proposed calls for an increase in the size of the tank. This potential increase in solid (which is a matter of use of the garbage disposal) is a matter of increased maintenance more than it is an increase in size capacity. This additional information is unnecessary.	NC Home Builders Assn, 10/25/2017	Agree
.0202	15	37	Delete the words garbage disposal		Parrish Homes and Pools,Inc, 10/23/2017	Agree
.0202	15	37	Delete the words garbage disposal		Pat Rentz, VIP Inspection Services, 9/25/2017	Agree
.0202	15	37	Delete the words garbage disposal		Perry's Grading & Septic Service, 9/14/2017	Agree
.0202	15	37	Delete the words garbage disposal		Randy Lackey, Love Valley Septic, 9/25/2017	Agree
.0202	15	37	Delete the words garbage disposal		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Agree
.0202	15	37	Delete the words garbage disposal		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Agree
.0202	15	37	Delete the words garbage disposal		Ronnie Burgin, 9/25/2017	Agree
.0202	15	37	This would require that the information contained in the application for a CA require an owner to include if they wre going to put in a garbage disposal. The use of a garbage disposal may not be known to the owner at the time the CA is issued and they would not know how much they would use the garbage disposal. In any event, when combined with the Tank Size Table on page 63, the purpose of this information would mean the local health department would increase the size of the septic tank. Any added volume that may be caused by a garbage disposal would be a matter of increased pumpouts to the homeowner, not a tank size issue.	Eliminate	Russ Ayers, Bennie Moore Septic Tank, 9/20/2017	Agree
.0202	15	37	Delete the words garbage disposal		Russell C. Trodgon, 9/18/2017	Agree
.0202	15	37	Delete the words garbage disposal		Russell Lineberry, 10/23/2017	Agree

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.0202	15	37	Delete the words garbage disposal		Sterlin Church, Church's Backhoe Service, 9/25/2017	Agree
.0202	15	37	Delete the words garbage disposal		Steve Cannon, Rowan LHD, 9/25/2017	Agree
.0202	15	37	Delete the words garbage disposal		Terry Maples, 10/23/2017	Agree
.0202	15	37	Delete the words garbage disposal		TM Grading, Inc, 10/23/2017	Agree
.0202	15	37	Delete the words garbage disposal		Tyler Jolley, 9/15/2017	Agree
.0202	15	37	Delete the words garbage disposal		Valentina Oxendine, 10/23/2017	Agree
.0202	15	37	Delete the words garbage disposal		Vince Scroggins, 9/14/2017	Agree
.0202	15	37	Delete the words garbage disposal		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Agree
.0202	15	37	Delete the words garbage disposal		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Agree
.0202	15	37	Delete the words garbage disposal		Willilam Garrison, EcoClean Septic, 9/25/2017	Agree
.0202	16	2	installer not owner		Glenn Hines, 10/29/2017	Disagree. This is intended to focus on the owner or their authorized representative. The installer may occasionally serve in this capacity but it cannot be limited to only the installer.
.0202	16	4	installer not owner		Glenn Hines, 10/29/2017	Disagree. This is intended to focus on the owner or their authorized representative. The installer may occasionally serve in this capacity but it cannot be limited to only the installer.
.0202	16	11	(g) (4) – Insert “and” in place of “or” on line 11. The number of bedrooms and the number of occupants are required on the application.		Len Gilstrap, Carteret LHD, 10/31/2017	Agree with modifications
.0202	16	11	Should state number of bedrooms and number of occupants, not or		Len Gilstrap, Carteret LHD, 9/20/2017	Agree with modifications
.0203	16	19	Title of Section should be "Improvement Permit Issued Directly by NCDEH" for clarity.	Title of Section should be "Improvement Pemrit Issued Directly by NCDEH" for clarity.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. With the addition of a sentence in Rule .0201 regarding the option of EOP we do not need to identify this rule as permitting by the LHD. That is already implied.
.0203	16	21	the word "SUITABLE" is used throughout - why is it in all caps, and should there be a definition associated with it?	Define suitable and perhaps remove it from all caps. CH: un-capitalize, define.	Lee Rashkin, Presby Environmental, 10/31/2017	Agree
.0203	16	25 to 26	Need to state or incorporate the requirements of 130A-336(a)(1 thru 6) within these rules for clarity.	Need to state or incorporate the specific requirements of 130A-336(a)(1 thru 6) within these rules for clarity.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. RRC specifically prohibits repeating statute in Rule.
.0203	16	27 to 28	Need to state or incorporate the requirements of 130A-334 within these rules for clarity.	Need to state or incorporate the specific requirements of 130A-334 within these rules for clarity.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. RRC specifically prohibits repeating statute in Rule.
.0203	17	1	Does all wastewater fall under DSE, NSF-40, TS1 or TS2? Small businesses like restaurants might have higher strength than DSE without needing pretreatment.	Can DSE be assumed if left unstated?	Connie Adams, Caldwell LHD, 10/31/2017	No. Have included a classification for high strengh effluent (HSE) for those small facilities that will have high strength wastewater.
.0203	17	6	Consider a form that has all the information that is required in this Paragraph that the LHD could sign and date.		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree. This form is posted on the website but there is no requirement for its use by LHDs.
.0203	17	7	Sentence needs to be modified for clarity.	Modify sentence: ……..report shall be provided to the owner describing all unsuitable site parameters and citing all applicable rule(s) for denial, and why alternative systems and/or site improvements are not applicable for permit issuance.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. Next sentence allows for communication of alternatives that can be used to overcome site limitations. Remember that the owner has to select the system type during the application process. The LHD evluates the site based onteh owner's selection.
.0203	17	7	installer not owner		Glenn Hines, 10/29/2017	Disagree. This is intended to focus on the owner or their authorized representative. The installer may occasionally serve in this capacity but it cannot be limited to only the installer.

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.0203	17	9	Five year permit expiration needs to stay. Permits being extended so long cause problems, sites change dramatically, neighboring sites are built on, the hydraulics on site can change, neighboring wells can be located on adjacent sites after the onsite permit is issued.		Len Gilstrap, Carteret LHD, 9/20/2017	Agree
.0203	17	9	Permits should not expire in five years. I would like to see permits expire in ten years. We see consumers having to pay for new permits all the time because it takes them several years to save the money after buying the lot to be able to build on it.		Russ Ayers, Bennie Moore Septic Tank, 9/20/2017	Disagree. There is an option for an owner to request a permit that is good forever (site plan vs plat).
.0203	17	16	This rule appears to require that permit be revoked when a new IP is applied for. This is unreasonable: people should be able to see if they have an option for another site without the existing approved area being revoked or suspended--I suggest that it be revoked before a new permit for the same design unit can be released or issued. This also saves the LHD from extra paperwork in the event a new permit cannot be issued.	(4) a new Improvement Permit is issued for the same design unit on the same property.	Connie Adams, Caldwell LHD, 10/31/2017	Agree with modifications
.0203	17	16	(f) (4) – add to the end of sentence "if a new Improvement Permit is issued". There is no reason to revoke until a new IP can be issued.		Len Gilstrap, Carteret LHD, 10/31/2017	Agree with modifications
.0204	17	23	Title of Section should be "Construction Authorization Issued Directly by NCDEH" for clarity.	Title of Section should be "Construction Authorization Issued Directly by NCDEH" for clarity.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. With the addition of a sentence in Rule .0201 regarding the option of EOP we do not need to identify this rule as permitting by the LHD. That is already implied.
.0204	17	24	installer not owner		Glenn Hines, 10/29/2017	Disagree. This is intended to focus on the owner or their authorized representative. The installer may occasionally serve in this capacity but it cannot be limited to only the installer.
.0204	17	37	"(F) trench widths, length, and depth on the downslope side of the trench."	"(F) trench widths, length, and depth on the downslope side of the trench. Trench depths shall be sited and subsequently verified by means of a engineer's transit or laser level from a mark placed by the LHD or PE or LSS on a fixed benchmark at the time of the IP or CA". Fixed Benchmark will need to be defined. However examples include a nail in tree, mark on crown of road, mark on edge of foundation. If you aren't designing the drainfield elevations from a fixed point, how is one supposed to determine if it's actually been installed at the proper level? Some soils have wonderful perfect identifiers that make it simple to determine if it has been placed at the proper level, however many do not. Without setting a fixed benchmark, no guarantee can be made that the drainfield has been set at the proper depth meaning that no assurances of public health protection can be reliably made. Think beach sand with how much soil movement and fill work is done on those sites.	Joe Soulia, Orenco Systems, 10/31/2017	Disagree. Determining if a trench has been installed at the proper level can be accomplished in a variety of ways. The use of benchmarks is taught and promoted for those sites when needed. However, given the variety of site conditions and various permitting practices around the state (such as indicating a trench depth "range" when appropriate to the site), the use of a benchmark is better left to the discretion of the person writing the permit.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0204	17	37	"(F) trench widths, length, and depth on the downslope side of the trench."	"(F) trench widths, length, and depth on the downslope side of the trench. Trench depths shall be sited and subsequently verified by means of a engineer's transit or laser level from a mark placed by the LHD or PE or LSS on a fixed benchmark at the time of the IP or CA". Fixed Benchmark will need to be defined. However examples include a nail in tree, mark on crown of road, mark on edge of foundation. If you aren't designing the drainfield elevations from a fixed point, how is one supposed to determine if it's actually been installed at the proper level? Some soils have wonderful perfect identifiers that make it simple to determine if it has been placed at the proper level, however many do not. Without setting a fixed benchmark, no guarantee can be made that the drainfield has been set at the proper depth meaning that no assurances of public health protection can be reliably made. Think beach sand with how much soil movement and fill work is done on those sites.	Steve Barry, AQWA, 10/31/2017	Disagree. Determining if a trench has been installed at the proper level can be accomplished in a variety of ways. The use of benchmarks is taught and promoted for those sites when needed. However, given the variety of site conditions and various permitting practices around the state (such as indicating a trench depth "range" when appropriate to the site), the use of a benchmark is better left to the discretion of the person writing the permit.
.0204	18	5 to 7	"A building permit shall not be issued until CA's for all wastewater system components serving the facility have been issued" The meaning of this is not clear to me, and I think part of it is that some words like "wastewater system" have not been used as defined by the statute and by 18E .0105. Does the revision shown to the right get at your intended meaning? If the intent was to provide in the rules for partial CA's, for example to allow long supply lines to offsite area to be built before lots are sold and well before drainfield design can be finalized, I strongly agree with that intent. There is a real need for that kind of flexibility on some projects.	"(d) A CA shall be issued for each ground absorption system serving a facility. Separate CA's may be issued for individual components. A building permit shall not be issued for a design unit until CA's for all components of the ground absorbtion system serving that design unit have been issued.	Connie Adams, Caldwell LHD, 10/31/2017	Agree.
.0204	18	8	Are multi-party agreements only needed between a developer and a homeowners association?	". . . a draft multi-party agreement among all parties involved in managing or using the system shall be submitted. . ."	Connie Adams, Caldwell LHD, 10/31/2017	Yes. The intent is to ensure that LHD's are NOT one of the parties in the "multi".
.0204	18	20	This looks like a multi-party agreement is required for any offisite system, even if there is only a small encroachment onto a neighbors property. I can see requiring a multi-party agreement for a remote off-site system on common property in a developemtn. but for a small encroachment onto an adjacent property the easement can adequately cover any maintenance issues between the parties.	see recommendation above for defining local and remote offsite systems in definitions. Somehow exclude small simple encroachments from this requirement.	Connie Adams, Caldwell LHD, 10/31/2017	Agree. Will clarify that a multi-party agreement is not required for a single off-site system.
.0204	18	22	Need to state or incorporate the requirments of 130A-336(a) within this rule for clarity.	Need to state or incorporate the requirments of 130A-336(a) within this rule for clarity.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. RRC specifically prohibits repeating statute in Rule.
.0204	18	27	This rule appears to require that permit be revoked when a new CA is applied for. This is unreasonable: people should be able to see if they have an option for another site without the existing approved area being revoked or suspended--I suggest that it be revoked before a new permit for the same design unit can be released or issued. This also saves the LHD from extra paperwork in the event a new permit cannot be issued.	(4) a new Construction Authorization is issued for the same design unit on the same property.	Connie Adams, Caldwell LHD, 10/31/2017	Agree with modifications
.0204	18	27	(i)(4) – add to end of sentence "if a new Construction Authorization Permit is issued". There is no reason to revoke until a new CA is issued.		Len Gilstrap, Carteret LHD, 10/31/2017	Agree with modifications
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		ABCD Construction, 9/14/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Andrew Daywalt, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Ben Hildreth, 9/25/2017	The language was deleted since it is already in statute.

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.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Benny Myers, Myers Septic Tanks Co, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Brian Beebe, 10/23/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Cable Septic and Backhoe Service, 10/23/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Charles Dodge, C&C Septic Services, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Charles Driggers, Driggers Septic Tank, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Charlie Brice, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Chris Hedrick, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Chriscoe Bacchoe Service, 10/23/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Daniel Newsome, D&D Organic Farming, 10/24/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Danny Dennis, 10/23/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		David Murphy, DRM, 10/24/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Derrick Driggers, Driggers Septic Tank, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Donald Martin, 10/23/2017	The language was deleted since it is already in statute.
.0204	18	28	THE REVIEW OF PERMITS > 5 YEARS OLD SHOULD BE AT THE REQUEST OF THE OWNER AND AFTER CONSULTATION WITH THE LHD, THE REVISED CA (WHICH MUST BE AT A PLAT SITE SINCE IT IS > 5 YEARS OLF) MAY BE ACCEPTED IN WRITING OF THE OWNER	THIS REVIEW FOR APPLICATIONS > 5 YEARS OLD IS STATED AS BEING WHERE "CURRENT TECHNOLOGY CAN BE EXPECTED TO IMPROVE THE WASTEWATER SYSTEM PERFORMANCE." SUGGEST IT IS MADE CLEAR THAT THE OWNER MAY CHOOSE TO RETAIN THE CONDITIONS AND DETAILS OF THE PERMIT.	Doug Lassiter, NCSTA, 10/24/2017	The language was deleted since it is already in statute.

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.0204	18	28	First, if the CA is greater than five years old, this site must have been applied for with a plat, which is good without expiration. If the owner does not request a re-evaluation of the site, regardless of the LHD information that there is current technology that can be expected to improve the wastewater system performance, is it within the authority of the LHD to withhold the OP if the installation follows the construction conditions of the existing CA? If the LHD can withhold the issuance of the OP because there is, in their opinion, newer technology that can improve the system performance without regard to additional cost to the owner, then the permit with a plat (without expiration) isn't really with expiration.	Add suggested language - "Upon written request and acceptance of the owner"	Doug Lassiter, NCSTA, 9/20/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Garland Walker, 10/23/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Gerald Leonard, 10/23/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Hank Hill Grading, 10/23/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Harry Hatcher, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Jeff Link, Rowan, LHD, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Jerry Pearce, 9/15/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Johnny Strickland, 10/23/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Kearns Pumping Service, 10/23/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Keith Blackburn, B & C Concrete, 9/20/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Kippy Blanks, 9/28/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Larry Beam, 9/23/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Lawrence Henning, 9/15/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Lester Breedlove, 10/23/2017	The language was deleted since it is already in statute.

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.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Mark Johnson, 10/23/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Marty Maness, 10/23/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Max Locklear, Locklear's Backhoe Service, 10/23/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Michael Barger, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	Paragraph (j)	If the CA is greater than five years old, this site must have been applied for with a plat, which is good without expiration. If the owner does not require a re-evaluation of the site, regardless of the LHD information that there is current technology that can be expected to improve the wastewater system performance, is it within the authority of the LHD to withhold the OP if the installation follows the construction conditions of the existing CA? If the LHD can withhold the issuance of the OP because there is newer technology that can improve the system performance without regards to additional cost to the owner, than the permit with a plat (without expiration).	NC Home Builders Assn, 10/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Parrish Homes and Pools,Inc, 10/23/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Pat Rentz, VIP Inspection Services, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Perry's Grading & Septic Service, 9/14/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Randy Lackey, Love Valley Septic, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Robert F. Youngblood, Youngblood Construction, 9/14/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Ronnie Burgin, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Russell C. Trodgon, 9/18/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Russell Lineberry, 10/23/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Sterlin Church, Church's Backhoe Service, 9/25/2017	The language was deleted since it is already in statute.

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.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Steve Cannon, Rowan LHD, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Terry Maples, 10/23/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		TM Grading, Inc, 10/23/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Tyler Jolley, 9/15/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Valentina Oxendine, 10/23/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Vince Scroggins, 9/14/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	The language was deleted since it is already in statute.
.0204	18	28	(i) should read as follows: "Upon written authorization of the owner a revised CA may be issued where the CA is great than five years." Also, what about plats?		Willilam Garrison, EcoClean Septic, 9/25/2017	The language was deleted since it is already in statute.
.0204	18	28 to 29	We appreciate the clarity of this rule, but needs to include the term "plat".	Modify rule: "Upon written request of the owner a revised CA(s) shall be issued for sites when the CA is greater than five years old, a plat is part of the IP issuance, and current technology can be considered to improve the wastewater system performance."	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	The language was deleted since it is already in statute.
.0205	18	35	Title of Section should be "Operation Permit Issued Directly by NCDEH" for clarity.	Title of Section should be "Operation Permit Issued Directly by NCDEH" for clarity.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. With the addition of a sentence in Rule .0201 regarding the option of EOP we do not need to identify this rule as permitting by the LHD. That is already implied.
.0205	19	3	delete "this Subchapter"		ABCD Construction, 9/14/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Andrew Daywalt, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Ben Hildreth, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.

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.0205	19	3	delete "this Subchapter"		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Brian Beebe, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Cable Septic and Backhoe Service, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Charles Dodge, C&C Septic Services, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Charles Driggers, Driggers Septic Tank, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.

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.0205	19	3	delete "this Subchapter"		Charlie Brice, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Chris Hedrick, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Chriscoe Bacchoe Service, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Daniel Newsome, D&D Organic Farming, 10/24/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Danny Dennis, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		David Murphy, DRM, 10/24/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.

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.0205	19	3	delete "this Subchapter"		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Donald Martin, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	This is a continuinig problem for the property owner. A much too recurring story across North Carolina is that the IP and CA is issued by an authroized agent, the system is installed per the conditions of the IP and CA, and then another authorized agent comes to the site and threatens to deny the OP unless changes are made, sometimes saying that the IP or CA should never have been issued. The owner is forced to invest more money into the project or lose the project. While no person is expected to never make a mistake in the site evaluation, there should be remedies that are available to the owner instead of (1) makin the necessary corrections at their sole cost, (2) request arbitration by the regional specialist from the OWPB, or (3) hire a lawyer. All three options require additional costs to th eowner, with no apparent responsibility on the part of the authorized agent. It may be as simple a solution as assignment of an authorized agent for all permit visit. There has been noted reasons by the OWPB that "errors may have been made" which is true.	Eliminate language - "~~this Subchapter and~~ any conditions of the IP and CA."	Doug Lassiter, NCSTA, 9/20/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Garland Walker, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Gerald Leonard, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.

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.0205	19	3	delete "this Subchapter"		Hank Hill Grading, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Harry Hatcher, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Jeff Link, Rowan, LHD, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Jerry Pearce, 9/15/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Johnny Strickland, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Kearns Pumping Service, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Keith Blackburn, B & C Concrete, 9/20/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.

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.0205	19	3	delete "this Subchapter"		Kippy Blanks, 9/28/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Larry Beam, 9/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Lawrence Henning, 9/15/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Lester Breedlove, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Mark Johnson, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Marty Maness, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Michael Barger, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.

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.0205	19	3	delete "this Subchapter"		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	"this Subchapter and any conditions of the IP, CA"	This is a continuing problem for property owners. The system is installed per the conditions of the IP and CA, and then another authorized agend comes to the site and threatens to deny the OP unless changes are made, while the agent claims the IP or CA should not have been issued. We believe "this Subchapter" should be removed, and systems should be adopted based on the conditions of the IP and CA.	NC Home Builders Assn, 10/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Parrish Homes and Pools,Inc, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Pat Rentz, VIP Inspection Services, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Perry's Grading & Septic Service, 9/14/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Randy Lackey, Love Valley Septic, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.

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.0205	19	3	delete "this Subchapter"		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Ronnie Burgin, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Russell C. Trodgon, 9/18/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Russell Lineberry, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Sterlin Church, Church's Backhoe Service, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Steve Cannon, Rowan LHD, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.

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.0205	19	3	delete "this Subchapter"		Terry Maples, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		TM Grading, Inc, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Tyler Jolley, 9/15/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Valentina Oxendine, 10/23/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Vince Scroggins, 9/14/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	3	delete "this Subchapter"		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.

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.0205	19	3	delete "this Subchapter"		Willilam Garrison, EcoClean Septic, 9/25/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	4	Move this paragraph to the end of the rule or reword?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Have removed the language.
.0205	19	4 to 5	Rule should state "Engineered Option Permit" for clarity, rather than just G.S. and Rule numbers.	Rule should state "Engineered Option Permit" for clarity, rather than just G.S. and Rule numbers.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. The rules for writing rules are very clear on how rules are to be referenced. Our language matches those requirements.
.0205	19	14	Is there a pressing state interest in having trench depth and width on OP? It seems like unnecessary information, and adds to clutter on OP. Leave this up to the local health department. It is important to have an as-built diagram of what was installed, reflecting changes compared to what was on the CA.	"as-built drawing of dispersal field as actually installed."	Connie Adams, Caldwell LHD, 10/31/2017	Disagree. Based on changes during installation, this level of detail is needed on the OP so that there is a final record of what is installed.
.0205	19	22	Are multi-party agreements only needed between a developer and a homeowners association?	". . . a draft multi-party agreement among all parties involved in managing or using the system shall be submitted. . ."	Connie Adams, Caldwell LHD, 10/31/2017	Yes. The intent is to ensure that LHD's are NOT one of the parties in the "multi".
.0205	19	24	(e) – insert “required to be” prior to “designed by an authorized designer or PE”		Len Gilstrap, Carteret LHD, 10/31/2017	Agree
.0205	19	26	This language allows the second agent to return a different opinion on the site conditions, etc, that may be in the rules and deny the OP until their opinion is met. The expense is almost always on the owner. Currently, the owner can agree to the changes and the installer must modify the installation or they can ask for a determination by the State representative, or they can hire a lawyer.	Amend this sentence structure to mirror the language in .0201, page 14, lines 26 to 28.	Doug Lassiter, NCSTA, 10/2/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	26	WHEN COMPARED WITH THE LANGUAGE ON PAGE 14, LINE 26-28, THIS PROPOSED RULE ALLOWS A SECONDARY OPINION OF ANOTHER MEMBER OF THE LHD THAT NEGATES THE CONDITIONS SET FORTH IN THE PERMIT. THIS ABILITY TO DENY THE OP UNTIL CHANGES ARE MADE PLACES THE COST OF ALL CHANGES ON THE OWNER. AND THERE IS NO WAY TO DETERMINE IF THE FIRST INTERPRETATION OR THE SECOND INTERPRETATION IS CORRECT, UNLESS MORE COST AND DELAYS ARE PLACED ON THE OWNER.	CHANGE THE WORDING TO REFLECT THE INSTALLATION SHALL FOLLOW THE CONDITIONS SET OUT BY THE IP AND CA. OMIT THE ABILITY OF THE LHD TO PLACE CHANGES ON THE PERMIT INSTALLATION UNLESS DOCUMENTED PER CITATION WITH RULE AND UNLESS THE COST IS ASSUMED BY THE LHD. OTHERWISE, PLACE IN THE RULES THAT CHANGES BROUGHT BY A SECONDARY REVIEW WILL RESULT IN A WRITTEN ENTRY IN THE INITIAL LHD STAFFERS FILE.	Doug Lassiter, NCSTA, 10/24/2017	Disagree. There is legal precedent for the State to correct an error. What you describe could very well be that a bad permit was issued and only discovered at installation. The Agent who discovers it should not be compelled to (and indeed cannot legally do so) approve a system and issue an OP for an installation that does not comply with the Rules. Owners have appeal rights.
.0205	19	31	Sentence placement is odd - should it be a (number) or (letter) or refer to (b) in line 14 or (F) in line 9?	Label/indent line so it is clear what subsection the section refers to. CH: move or label sentence.	Lee Rashkin, Presby Environmental, 10/31/2017	Agree
.0205	19	34	State the particular part(s) or actual language of G.S. 130A, Article 11 that pertains to the validity of the OP.	State the particular part(s) or actual language of G.S. 130A, Article 11 that pertains to the validity of the OP.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree. Removed reference to G.S.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0205	20	2	Delete (h) because it sets a definitive life of system		ABCD Construction, 9/14/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Andrew Daywalt, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Ben Hildreth, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.

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.0205	20	2	Type V and Type VI systems are managed, inspected, sampled and reported. Why are these permits the only Operating Permits that expire? The performance of these systems is known. It appears that paragraph (g) already provides adequate criteria for Type V & VI operation permits and paragraph (h) is not needed.		Bill Fenner, Aquapoint, 10/29/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Agree with Steve Barry and Bill Fenner about operation permits should be renewable for systems with mechanical components.		Bob Rubin, NCSU, 10/4/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Brian Beebe, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.

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.0205	20	2	Delete (h) because it sets a definitive life of system		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Cable Septic and Backhoe Service, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Charles Dodge, C&C Septic Services, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.

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.0205	20	2	Delete (h) because it sets a definitive life of system		Charles Driggers, Driggers Septic Tank, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Charlie Brice, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Chris Hedrick, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Chriscoe Bacchoe Service, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.

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.0205	20	2	Delete (h) because it sets a definitive life of system		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Daniel Newsome, D&D Organic Farming, 10/24/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Danny Dennis, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.

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.0205	20	2	Delete (h) because it sets a definitive life of system		David Murphy, DRM, 10/24/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Donald Martin, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	ELIMINATE THE EXPIRATION OF TYPE V OR VI SYSTEMS AS A RESULT OF A FINITE DATE (5 YEARS AFTER BEING ISSUED)	TYPE V AND VI SYSTEMS ARE PERMITTED WITH A HIGH DEGREE OF OPERATION AND MAINTENANCE REQUIREMENTS. THESE SYSTEMS SHOULD BE REVIEWED BASED ON COMPLIANCE AND PERFORMANCE, NOT A SPECIFIED DATE.	Doug Lassiter, NCSTA, 10/24/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.

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.0205	20	2	This is an unusual approach to verifying the performance of Type V and VI systems, or any treatment systems that has been capitalized and providing wastewater service. Simply, what does five years have to do with it? The systems are to have a frequent inspection and sampling program in place, and the local health departments should be receiving operator reports and lab samples. So the verification program should not have a finite date of expiration, instead the consistent and constant operator program should give all the information needed to have ongoing performance. Is this a method of funding for the local government? The legislation for Periodic Review and Elimination of Rules was not passed to provide a method of raising fees.	Eliminate (h). Instead make sure the current operator program, with the local health department and the Department receiving the required reports and lab reports is supported.	Doug Lassiter, NCSTA, 9/20/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Garland Walker, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.

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.0205	20	2	Delete (h) because it sets a definitive life of system		Gerald Leonard, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Hank Hill Grading, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Harry Hatcher, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Jeff Link, Rowan, LHD, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.

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.0205	20	2	Delete (h) because it sets a definitive life of system		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Jerry Pearce, 9/15/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Johnny Strickland, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Kearns Pumping Service, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.

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.0205	20	2	Delete (h) because it sets a definitive life of system		Keith Blackburn, B & C Concrete, 9/20/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Kippy Blanks, 9/28/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Larry Beam, 9/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Lawrence Henning, 9/15/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.

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.0205	20	2	Delete (h) because it sets a definitive life of system		Lester Breedlove, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Mark Johnson, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Marty Maness, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.

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.0205	20	2	Delete (h) because it sets a definitive life of system		Michael Barger, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Type V and VI systems have requirements of inspections, sampling, and reporting and the systems should be subject to suspension or revocation based on inability to meet compliance, not a specified date.		Mike Stidham, E-Z Treat, 10/31/2017	Agree. However, a renewable permit is an enforcement tool for a LHD. If the owner does not continue to pay for an operator, etc, this allows the LHD further enforcement tools.

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.0205	20	2	Paragraph (h)	We do not believe these permits should expire due to an arbitrary date. Rather, the permits expiration should be determined on the working operation of the system.	NC Home Builders Assn, 10/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Parrish Homes and Pools,Inc, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Pat Rentz, VIP Inspection Services, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Perry's Grading & Septic Service, 9/14/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.

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.0205	20	2	Delete (h) because it sets a definitive life of system		Randy Lackey, Love Valley Septic, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Ronnie Burgin, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0205	20	2	Delete (h) because it sets a definitive life of system		Russell C. Trodgon, 9/18/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Russell Lineberry, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Sterlin Church, Church's Backhoe Service, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Steve Cannon, Rowan LHD, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.

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.0205	20	2	Delete (h) because it sets a definitive life of system		Terry Maples, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		TM Grading, Inc, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Tyler Jolley, 9/15/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Valentina Oxendine, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.

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.0205	20	2	Delete (h) because it sets a definitive life of system		Vince Scroggins, 9/14/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.
.0205	20	2	Delete (h) because it sets a definitive life of system		Willilam Garrison, EcoClean Septic, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0205	20	2 to 3	"(h) For a Type V or VI system as specified in Table XXXI of Rule .1301 of this Subchapter, the OP shall expire five years after being issued."	All Operation Permits shall expire five years from date of issue. For a Type I or II system as specified, in Table XXXI of Rule .1301 of this Subchapter, the OP shall be renewed by the LHD after presenting documentation of a pump out by an Authorized Septage Hauler, or an inspection by the LHD, the contracted Certified Operator of the system, or a Certified Inspector which states the system to be a functioning subsurface treatment system as defined by <needs definition>.For a Type III, IV, V or VI system as specified, in Table XXXI of Rule .1301 of this Subchapter, the OP shall be renewed after presenting documentation of an inspection by the LHD, the contracted Certified Operator of the system, or a Certified Inspector which states the system to be a functioning subsurface treatment system as defined by <needs definition>.	Joe Soulia, Orenco Systems, 10/31/2017	Agree with concept, however at this time it is not feasible for every onsite wastewater system operation permit to expire. We agree that all systems need routine operation and maintenance, but we do not have the overall support from the onsite industry for this very significant change.
.0205	20	2 to 3	"(h) For a Type V or VI system as specified in Table XXXI of Rule .1301 of this Subchapter, the OP shall expire five years after being issued."	An expiring OP is a powerful tool to encourage proper operation and sustainable infrastructure. While we realize that requiring expiring OP's on ALL onsite systems may seem like a bridge too far, only requiring it for systems that have an Certified Operator and County Inspection requirement is redundant and turning a blind eye to many sites with concerns and problems. A system with a pump (Type III) and a Low Pressure Pipe or Off Site system (type IV) are at much greater risk of premature failure than a conventional gravity system and yet they have no required Certified Operator or County oversight. These two especially are glaring examples of the absolute perfect scenario in which an expiring OP can help preserve the environment, or a save a life (falling in tank), or prolong the life of the system at a minimum.	Joe Soulia, Orenco Systems, 10/31/2017	Agree with concept. We have tried to take this concept to the next step in the proposed rules by giving the LHD the option to have the private sector conduct the Type IIIb inspections. We hope by doing this more wastewater systems will be inspected than are currently, with the eventual goal being to have all systems inspected on a regular basis.
.0205	20	2 to 3	"(h) For a Type V or VI system as specified in Table XXXI of Rule .1301 of this Subchapter, the OP shall expire five years after being issued."	All Operation Permits shall expire five years from date of issue. For a Type I or II system as specified, in Table XXXI of Rule .1301 of this Subchapter, the OP shall be renewed by the LHD after presenting documentation of a pump out by an Authorized Septage Hauler, or an inspection by the LHD, the contracted Certified Operator of the system, or a Certified Inspector which states the system to be a functioning subsurface treatment system as defined by <needs definition>.For a Type III, IV, V or VI system as specified, in Table XXXI of Rule .1301 of this Subchapter, the OP shall be renewed after presenting documentation of an inspection by the LHD, the contracted Certified Operator of the system, or a Certified Inspector which states the system to be a functioning subsurface treatment system as defined by <needs definition>.	Steve Barry, AQWA, 10/31/2017	Agree with concept, however at this time it is not feasible for every onsite wastewater system operation permit to expire. We agree that all systems need routine operation and maintenance, but we do not have the overall support from the onsite industry for this very significant change.
.0205	20	2 to 3	"(h) For a Type V or VI system as specified in Table XXXI of Rule .1301 of this Subchapter, the OP shall expire five years after being issued."	An expiring OP is a powerful tool to encourage proper operation and sustainable infrastructure. While we realize that requiring expiring OP's on ALL onsite systems may seem like a bridge too far, only requiring it for systems that have an Certified Operator and County Inspection requirement is redundant and turning a blind eye to many sites with concerns and problems. A system with a pump (Type III) and a Low Pressure Pipe or Off Site system (type IV) are at much greater risk of premature failure than a conventional gravity system and yet they have no required Certified Operator or County oversight. These two especially are glaring examples of the absolute perfect scenario in which an expiring OP can help preserve the environment, or a save a life (falling in tank), or prolong the life of the system at a minimum.	Steve Barry, AQWA, 10/31/2017	Agree with concept. We have tried to take this concept to the next step in the proposed rules by giving the LHD the option to have the private sector conduct the Type IIIb inspections. We hope by doing this more wastewater systems will be inspected than are currently, with the eventual goal being to have all systems inspected on a regular basis.
.0205	20	4 to 6	State the particular part(s) or actual language of G.S. 130A, Article 11 that pertains to the compliance of the OP.	State the particular part(s) or actual language of G.S. 130A, Article 11 that pertains to the compliance of the OP.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree. Removed reference to G.S.
.0205	20	7 to 9	State the particular part(s) or actual language of G.S. 130A, Article 11 and G.S. 130A Article 2 that pertains to the remedies, modification, suspension, or revoking of the OP.	State the particular part(s) or actual language of G.S. 130A, Article 11 and G.S. 130A Article 2 that pertains to the remedies, modification, suspension, or revoking of the OP.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree. Removed reference to G.S.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0205	20	10	Delete "expires"		ABCD Construction, 9/14/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Andrew Daywalt, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Ben Hildreth, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.

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.0205	20	10	Delete "expires"		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Brian Beebe, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Cable Septic and Backhoe Service, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.

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.0205	20	10	Delete "expires"		Charles Dodge, C&C Septic Services, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Charles Driggers, Driggers Septic Tank, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Charlie Brice, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.

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.0205	20	10	Delete "expires"		Chris Hedrick, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Chriscoe Bacchoe Service, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Daniel Newsome, D&D Organic Farming, 10/24/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.

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.0205	20	10	Delete "expires"		Danny Dennis, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		David Murphy, DRM, 10/24/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0205	20	10	Delete "expires"		Donald Martin, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	ELIMINATE (k) AND LET THE OPs BE REVOKED BASED ON PERFORMANCE, NOT A FINITE DATE.	ELIMINATE	Doug Lassiter, NCSTA, 10/24/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	This appears to refer to page 20 line 2, where Type V and VI systems would expire in five years. As suggested above, if the system is functioning in compliance with the permit, why should the permit expire.	Eliminate (h). The system should not have an expiration date, and a system that is revoked due to non-compliance than the site would have to have a new permit anyway, as noted in other parts of this Subchapter.	Doug Lassiter, NCSTA, 9/20/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.

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.0205	20	10	Delete "expires"		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Garland Walker, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Gerald Leonard, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Hank Hill Grading, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.

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.0205	20	10	Delete "expires"		Harry Hatcher, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Jeff Link, Rowan, LHD, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Jerry Pearce, 9/15/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.

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.0205	20	10	Delete "expires"		Johnny Strickland, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Kearns Pumping Service, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Keith Blackburn, B & C Concrete, 9/20/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Kippy Blanks, 9/28/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.

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.0205	20	10	Delete "expires"		Larry Beam, 9/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Lawrence Henning, 9/15/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Lester Breedlove, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Mark Johnson, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.

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.0205	20	10	Delete "expires"		Marty Maness, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Michael Barger, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.

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.0205	20	10	Delete "expires"		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Parrish Homes and Pools,Inc, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Pat Rentz, VIP Inspection Services, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Perry's Grading & Septic Service, 9/14/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.

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.0205	20	10	Delete "expires"		Randy Lackey, Love Valley Septic, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Ronnie Burgin, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.

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.0205	20	10	Delete "expires"		Russell C. Trodgon, 9/18/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Russell Lineberry, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Sterlin Church, Church's Backhoe Service, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Steve Cannon, Rowan LHD, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.

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.0205	20	10	Delete "expires"		Terry Maples, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		TM Grading, Inc, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Tyler Jolley, 9/15/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Valentina Oxendine, 10/23/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.

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.0205	20	10	Delete "expires"		Vince Scroggins, 9/14/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10	Delete "expires"		Willilam Garrison, EcoClean Septic, 9/25/2017	Disagree. Type V and VI fall into one of two categories: advanced pretreatment or systems with a design daily flow greater than 3,000 gpd. The majority of advanced pretreatment systems that are installed utilize the reduced siting and sizing criteria in the rules. Everyone will agree that onsite wastewater treatment systems need to be maintained at some level. Advanced pretreatment and larger systems need to be inspected and maintained more frequently because their failure could cause a greater impact to public health and the environment. Renewable permits are just one example of enforcement mechanisms available to the LHD and OSWP. Others will be included in the proposed rules.
.0205	20	10 to 11	Why is a new application required for continued operation of an approved and compliant system simply because of a time expiration?	Why is a new application required for continued operation of an approved and compliant system simply because of a time expiration? If in compliance an OP should be renewed for continued operation of the system.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Language was confusing. Have modified the language to distinguish between when an OP expires and when one is revoked and why those would occur.
.0206	20	18	written authorization for a manufactured home to be connected to an existing system /Why are manufactured homes singled out?	Manufactured homes are considered single family dwellings. CH/RE: Change all language specifically regarding manufactured homes to single family dwellings.	Lee Rashkin, Presby Environmental, 10/31/2017	Agree

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.0206	20	22	What is the definition of reuse or rather what is disuse?		Chad Gambill, Caldwell County Health Dept, 10/31/2017	Agree and have removed the term
.0206	20	22	what do you mean by "reuse of an existing system"? If a house has been abandoned for a couple of years, is it necessary to look at septic system before it is put back into use? To what end?	remove this line	Connie Adams, Caldwell LHD, 10/31/2017	Agree and have removed the term
.0206	20	24	(b) – "which has a valid OP" What if permits are not available or can't be located any longer and the systems have been in use for years and .0102 does not apply. Add "or has been documented to be in use by LHD records or tax records".		Len Gilstrap, Carteret LHD, 10/31/2017	Disagree. If an operation permit cannot be located in the LHD records, the system is assumed to be permitted absent any evidence to the contrary.
.0206	20	32 to 33	State the particular part(s) or actual language of G.S. 130A, Article 11 that pertains to the re-issance of the OP for an existing system.	State the particular part(s) or actual language of G.S. 130A, Article 11 that pertains to the re-issance of the OP for an existing system.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree and language has been removed.
.0206	20	34	Does 130A-338 or 130-337 apply to this provision and lend statutory authority to the requirement of compliance inspections and the subsequent report required by .0206 d		Chad Gambill, Caldwell County Health Dept, 10/31/2017	Yes
.0206	20 to 21	18 to 4	Really appreciate having this important function codified. For reconnects when a new structure or trailer is connected to an existing system, and for footprint expansions, having legal authority to make sure that the system is not encroached on by the change is incredibly useful in preventing catastrophes.		Connie Adams, Caldwell LHD, 10/31/2017	Thank you
.0206	20 to 21	34 and 1	What do authorized agents do if existing structures do not meet setbacks to the existing septic system? I believe that it is very important that rule .0206 needs to address the issue of what actions should be taken if an existing system is already noncompliant when the authorized agent goes out to check setbacks for new building additions/expansions. Example, authorized agents are asked to go out for an inspection for a new garage and find that the new garage will meet the current setback rules; however, there is an existing garage, pool or other building over part of the septic system or a drive over the drainfield. Maybe the septic tank is on this property but part of the drainfield is on another property (property has been divided since permit issued). What do authorized agents do now? Issue the permit? Deny the permit? Issue the Permit for the new addition and a NOV for the existing system? These are the BIG questions authorized agents are having problems with currently. What are our alternatives? What can authorized agents legally do? In the past 20 years that I have been working as an EHS, most authorized agents have been issuing Authorization of Existing System permits for additions such as pools, garages, etc. When situations like these came up, the authorized agent would issue a denial letter for the addition until the existing system was brought into compliance. This way the owners bring the system into compliance before they can do the addition.		John Teague, Alexander LHD, 9/18/2017	Existing system inspections are only to verify that setbacks to proposed construction are met. Existing encroachments are documented, with that documentation provided to the owner and kept in LHD records for future reference. In the case of portions of a system which are not located on property owned or controlled by the system owner, contact your Regional LSS for guidance.

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.0206	20 to 21	34 and 1	Otherwise, they may do the addition and never fix the system because they spent the money on the addition. Authorized agents are issuing an Authorization of the existing system, which I consider stating that the existing system is ok, functioning correctly, and is in compliance with the current rules and regulations. But in the past couple of years, some applicants have requested the state look at some sites authorized agents have denied permits to and authorized agents have been told to issue the permits because the proposed additions meet the setbacks even though the existing systems are not meeting the setback requirements (pools over drainlines, decks over tanks, buildings over drainlines and/or tanks etc.). Authorized agents were also told not to issue a NOV unless the system is failing. The rule as written is saying the same thing. Issue the permit if the addition meets the setbacks. It never addresses the issue if the existing structures, pools, property lines etc. must meet the setbacks also. If an authorized agent issues a permit for an addition where the existing system knowingly has a building, a pool, etc. located on top of it (because we had to locate the existing system to make sure the proposed structures meet the setbacks and to measure for setbacks to the existing structures to show on the site plan) and knowing the existing system does not currently meet the setback rules according to the Laws and Rules for Sewage Treatment and Disposal are the authorized agents not showing negligence and could be held liable if the system fails.		John Teague, Alexander LHD, 9/18/2017	Existing system inspections are only to verify that setbacks to proposed construction are met. Existing encroachments are documented, with that documentation provided to the owner and kept in LHD records for future reference. In the case of portions of a system which are not located on property owned or controlled by the system owner, contact your Regional LSS for guidance.
.0206	20 to 21	34 and 1	I would just like clarification on what the authorized agents are to do in these situations and think it should be addressed in the rules so all counties are being consistent across the state. Issuing a permit for an existing system inspection is fine if everything meets the setbacks including existing structures and etc. Issuing an existing system inspection permit if only the proposed addition meets the setbacks but the existing structures do not sounds like authorized agents are approving the existing system when we know it is in noncompliance. Is this what the rule is wanting the authorized agents to do? If the existing structures do not meet the setbacks are the authorized agents supposed to issue a (NOV) notice of violation or just make a statement that the existing structures do not meet the setbacks and issue the permit anyway? I see no difference in a malfunctioning system and a system that does not meet the setback rules. Both mean the system is noncompliant. A system that does not meet the setback rules if brought into compliance at the time of the Existing System Inspection may prevent premature system failures and prevent homeowners from costly repairs in the near future. If the failing system must be brought into compliance then why does the system that does not meet the setbacks not have to be brought into compliance as well? These situations should be addressed in the rules so all counties will be more consistent across the state.		John Teague, Alexander LHD, 9/18/2017	Existing system inspections are only to verify that setbacks to proposed construction are met. Existing encroachments are documented, with that documentation provided to the owner and kept in LHD records for future reference. In the case of portions of a system which are not located on property owned or controlled by the system owner, contact your Regional LSS for guidance.

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.0207	21	10	House Bill 765 from the 2015 legislative session states the following: Where the professional engineer's designs, plans, and specifications call for the installation of a conventional wastewater system, such designs, plans, and specifications shall allow for the installation of an accepted system in lieu of a conventional system in accordance with the accepted system approval. This legislative provision for accepted systems was omitted from the rules.	Add the allowance for accepted systems at the end of Rule .0207(d) on line 34 on page 21, as follows: Accepted systems are allowed in accordance with G.S. 130A-336.1(e)(5).	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Disagree. RRC specifically prohibits repeating statute in Rule. However, agree that some reference to this should be made and will attempt to do that.
.0207	21	14 to 15	Good precise statement regarding roles of LSS and LG in the permitting process.		Connie Adams, Caldwell LHD, 10/31/2017	Thank you
.0207	21	32	This language is very restrictive - only pretreatment technologies; while on the other hand it is very liberal - any pretreatment technology not approved in NC - which could mean not approved or even not used anywhere else.	I suggest considerationof additional language such as "pretreatment technologies or other onsite wastewater technologies, techniques, or features approved and used for 5 years or more in other states but not approved in this state."	Chip Hassett, The Oak Hill Company, Ltd, 10/2/2017	Disagree. G.S. 130A-336.1(e)(1) specifies that this provision applies only to preteatment technologies. Pretreatment is defined in G.S. 130A-334(7b).
.0207	21	34	improper grammar - should be a possessive "manufacturer's" instead of a plural "manufacturers"	Change to manufacturer's to indicate possessive use of word. RE: replace "manufacturers" with "manufacturer's".	Lee Rashkin, Presby Environmental, 10/31/2017	Agree
.0207	22	17	Expand "record drawings" to include "reflecting all changes made in the specifications and working drawings including location of all elements, setbacks, etc, per NCBELS guidelines (or define record drawing?)"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Record drawings is a recognized engineering term. We will proceed with this term and if additional clarification is needed, RRC will let us know.
.0207	22	19	Sentence placement is odd - should it be a (number) or (letter) or refer to (2) in line 23 of page 52 or (5) in line 8?	Label/indent line so it is clear what subsection the section refers to. CH: move or label sentence.	Lee Rashkin, Presby Environmental, 10/31/2017	Agree
.0207	22	25	Installer	Use term the certified installer/certified contractor (capitalize or italize defined word)	Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. The system may be installed by the homeowner who is "authorized" by statute and rule, or by a contractor who is "certified" by the NCOWCICB. Thus, the broader term "installer" is appropriate. The rules for writing rules does not allow for capitalization or italizing of defined words.
.0207	22	30	THIS SUBSECTION CONCERNS THE EOP. THE RESPONSIBILITIES OF THE LHD DOES NOT INCLUDE THE ATTENDANCE AT THE POST-CONSTRUCTION MEETING	ADD THE ATTENDANCE OF THE LHD AT THE POST-CONSTRUCTION MEETING	Doug Lassiter, NCSTA, 10/24/2017	Disagree. RRC specifically prohibits repeating statute in Rule. However, agree that some reference to this should be made and will attempt to do that.
.0207	22	30	The responsibilities listed for the LHD does not appear to have attendance at the post-construction meeting.	Verify that this attendance is continued to be required by rule.	Doug Lassiter, NCSTA, 9/20/2017	Disagree. RRC specifically prohibits repeating statute in Rule. However, agree that some reference to this should be made and will attempt to do that.
.0207	23	7	Include common form after NOI		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Paragraph (c) specifies that the NOI shall be submitted on the common form. Does not need to be included after every NOI reference.
.0301	23		ADD THE RESPONSIBILITY OF THE OWNER TO ESTABLISH APPROPRIATE SITE SPECIFIC VEGETATION OVER THE WASTEWATER SYSTEM AND REPLACEMENT AREA	THIS RESPONSIBILITY IS WITH THE OWNER NOT THE INSTALLER.	Doug Lassiter, NCSTA, 10/24/2017	Agree
.0301	23		Very easy to read, good format, great to have all responsibilities of owner in one place.		Len Gilstrap, Carteret LHD, 10/31/2017	Thank you
.0301	23	19	This language should be included in owner responsibilities, instead of on page 72, line 16, under General Design and Installation Criteria.	Add new (12) establish appropriate site specific vegetation over the wastewater system and replacement area.	Doug Lassiter, NCSTA, 10/2/2017	Agree
.0301	23	19 to 37	List of owners responsibilities.	...or what? What legal recourse does the Branch and/or LHD have if the owner does not comply with this list of requirements. We believe this should be spelled out clearly (in approximately this location) as it will help installers, pumpers, operators, and LHD's get compliance from owners in violation.	Joe Soulia, Orenco Systems, 10/31/2017	This identifies the owner's reponsibility and gives the LHD the ability to notify the owner when the system is out of compliance.

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.0301	23	19 to 37	List of owners responsibilities.	...or what? What legal recourse does the Branch and/or LHD have if the owner does not comply with this list of requirements. We believe this should be spelled out clearly (in approximately this location) as it will help installers, pumpers, operators, and LHD's get compliance from owners in violation.	Steve Barry, AQWA, 10/31/2017	This identifies the owner's reponsibility and gives the LHD the ability to notify the owner when the system is out of compliance.
.0301	23	20	I like the Operation and Maintenance options for IIIb systems however enforcement actions must be in place for properties that do not follow requirements for inspection frequency. Also have a definition for Non-compliant system status?		Alan Clapp, LSS, 10/24/2017	Agree with concept, but trying to define a non-compliant system has proven to be very difficult.
.0301	23	30	(7) THIS SENTENCE SHOULD REALLY BE EMPHASIZED. THE OWNER IS ULTIMATELY RESPONSIBLE FOR THEIR SEPTIC TANK SYSTEM, AND THERE SHOULD BE NO EXCUSE FOR A LAPSE IN CONTRACT WITH A CERTIFIED OPERATOR, WHEN NOTED IN 15A NCAC 18E .1301	THE ONLY WAY TO SUSTAIN COMPLIANCE IS TO APPLY SOME SORT OF OVERSIGHT ON THESE SYSTEMS. THIS STARTS WITH OWNER AWARENESS AND ACCOUNTABILITY, EXTENDS TO LHD RECEIVING AND ACTING ON THE REPORTS, AND THE STATE COMPILING THE ACTIVITY REPORTS. CONSIDER WORKING WITH DEQ ON STRENGTHENING THE OPERATOR PROGRAM	Doug Lassiter, NCSTA, 10/24/2017	Agree in spirit but there is little more we can do to emphasize.
.0301	23	32	Capitalize defined words such as artifical drainage system		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. The rules for writing rules do not allow for this option.
.0301	23	32	Include as required		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. This opens the door to waffling on this requirement. If there is a drainage system, they must maintain it.
.0301	24	9	Do not like this. Have many very small lots. Have had to ask for easements from Town. The town wants to know exactly how much land is needed before an easement is granted. Would like to see a clarification of what LHDs can do in this situation		Daniel Allen, Carteret LHD, 9/20/2017	Agree with issues and have removed language. Requiring before the issuance of an IP is similar to doing a preliminary, which is not what we want.
.0301	24	9	Easement must be obtained prior to issuance of IP. This would require the permit to be denied and the denial letter conditioned for the easement to get an IP. If this is not done within the 12 month expiration of the application, the owner would have to reapply. Some clarification is needed to indicate how this information is provided to applicant that legally meets the “permit or denial” requirements when acting on an application.		Len Gilstrap, Carteret LHD, 10/31/2017	Agree with issues and have removed language. Requiring before the issuance of an IP is similar to doing a preliminary, which is not what we want.
.0301	24	9	Necessary easements, etc, should not be required before the IP is issued. IPs have been conditioned in the past for easements and should stay this way.	Do not require easements or encroachments before the issuance of the IP.	Len Gilstrap, Carteret LHD, 9/20/2017	Agree. Requiring before the issuance of an IP is similar to doing a preliminary, which is not what we want.
.0301	24	20	Both a meets and bounds discription and a plat for an easement? I think one would be sufficient; as in the current language.		Chad Gambill, Caldwell County Health Dept, 10/31/2017	Agree with modifications
.0301	24	20	Do you mean to require both description and survey map? Not always necessary and a burden on the public. Is "deed" the correct term here?	"specified in a recorded easement by metes and bounds description or attached survey map. . ."	Connie Adams, Caldwell LHD, 10/31/2017	Agree with modifications
.0302	24	36 to 37	G.S. 130A-336.1 needs to state Engineered Option Permit under Subsection .0207 of these rules for clarity.	Modify sentence to: "……unless the permit is issued in accordance with G.S. 130A-336.1 an Engineered Option Permit under Subsection .0207 of these rules." for clarity.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree with modifications. Added Rule .0207 citation to this sentence.
.0302	25	4	"The State shall review and approve for compliance and approval the …"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. We are compliance officers and reviews that we perform are all compliance reviews.

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.0302	25	11	equal to 5000 not 3000		Glenn Hines, 10/29/2017	Disagree. During the previous draft rule revision, in the late 1990's and early 2000's, this design daily flow was proposed to be increased for coastal counties. Since that time we have re-evaluated whether or not it makes sense to increase (or decrease) this number. What makes the most sense is to leave it alone. The current system is working, and with the addition of the EOP, an owner or PE does not have to wait for OSWP review.
.0302	25	11 to 18	Glad to see this exception left in the rules. It is really important that properties with several or many small drainfields spread out over a large area not be treated as large systems with the attendant additional regulatory requirements. There is no technical reason to impose the added requirements for lateral flow and state review on these sites. This rule as set up appears to adequately address the state's need to balance the potential impact of very concentrated areas of septic disposal (ie, >3000 gpd **drainfields**) with its interest in not having to go through those extra regulatory steps for facilities/wastewater systems that do not have those potential impacts even though the overall wastewater system is over 3000 gpd. Note small typo in (1)--structure of sentence does not match 2 and 3.	"(1) individual ground absorbtion systems serving individual design units have a design daily flow less than or equal to 1500 gpd"	Connie Adams, Caldwell LHD, 10/31/2017	We believe the language in the proposed rules is appropriate.
.0302	25	13	1,250 gpd/40,000 sq ft is more restrictive		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Our goal is not to make the rules more restrictive without a good justification.
.0302	25	17 to 18	State review requirement for daily flow rates of ≥1500 gal/day/acre is artificially limiting for any suitable high LTAR sites. Where and how was this acreage flow rate determined? A daily flow rate / acre could be >10,000 gal/day/acre for suitable sites with a high LTAR of 1.0 gal/day/sqft and separate 1500 gal/day systems. A conservative daily rate of 6500 gal/day/acre = ~0.15 gal/day/sqft would account for any groundwater mounding or hydrologic mass overloading on high rate suitable sites. This acreage loading rate also aligns with NCDEQ 2T rules.	State review requirement for daily flow rates of 1500 gal/day/acre is artificially limiting for any suitable high LTAR sites. Where and how was this acreage flow rate determined? A daily flow rate / acre could be >10,000 gal/day/acre for suitable sites with a high LTAR of 1.0 gal/day/sqft and separate 1500 gal/day systems. A conservative daily rate of 6500 gal/day/acre = ~0.15 gal/day/sqft would account for any groundwater mounding or hydrologic mass overloading on high rate suitable sites. This acreage loading rate also aligns with NCDEQ 2T rules.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. It is inaccurate to directly compare 02T permitting parameters to ours. Their rates include additional items, such as ET and agronomic nutrient balance. Despite that, assigning a single threshold across the state is difficult if not impossible. Over time, and armed with appropriate data, we could justify doing so.
.0302	25	19	The new rules require lateral flow or mounding analysis once the wastewater systems goes over 3,000 gpd, even for systems that do not require state review as determined in .0302(e).	There are situations where this is not necessary and I ask that this be changed.	Caroline Edwards, Earthwise Designs, 10/31/2017	Agree and we have modified the rules.
.0302	25	21 to 22	Please state the section / subsection being referred to in S.L. 2013-413 and S.L. 2014-120 as to liability. Also insert word "properly" in sentence..... liable for a system properly approved or permitted in accordance with this Paragraph.	Please state the section / subsection being referred to in S.L. 2013-413 and S.L. 2014-120 as to liability. Also insert word "properly" in sentence..... liable for a system properly approved or permitted in accordance with this Paragraph.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree and disagree. We have included the Section references for the Session Laws in the proposed rules. We will not be including the word properly. Any word that ends in "ly" needs to be defined, and we are not going to define properly for these S.L.
.0303	25	35 to 37	Confusion over this requirement among staff. Needs to more clearly specify that “only groundwater lowering systems” are required to be designed by a professional. Does not include interceptor drainage.		Len Gilstrap, Carteret LHD, 10/31/2017	Interceptor drains can be designed by LHD. Have clarified this language in the rules.
.0303	26	5	greater than 5000 not 3000		Glenn Hines, 10/29/2017	Disagree. During the previous draft rule revision, in the late 1990's and early 2000's, this design daily flow was proposed to be increased for coastal counties. Since that time we have re-evaluated whether or not it makes sense to increase (or decrease) this number. What makes the most sense is to leave it alone. The current system is working, and with the addition of the EOP, an owner or PE does not have to wait for OSWP review.

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.0303	26	5 to 8	Simplify		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree but the first bullet in the list is truly the best place to list the exceptions.
.0303	26	6 to 8	The exceptions part of this rule needs to be moved to first part of .0303 (b) for clarity when an engineered design is or is not required.	The stated exclusion clause within .0303 (b)(1) is unclear as to its meaning??? "……..except where the system is limited to an individual wastewater system serving an individual dwelling unit or multiple individiual wastewater systems, each serving an individual dwelling unit." Please reword this exclusion clause for clarity to the reader.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree
.0303	26	16	one or more intermediate high points		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	We have met with NCBELS and agreed to criteria.
.0303	26	18	Does this imply that only a system designed by a PE can use “adjusted design daily flow with low-flow fixtures or low-flow technologies?		Len Gilstrap, Carteret LHD, 10/31/2017	No. Rule .0403(c) allows use of extreme water using fixtures and does NOT require a PE although they typically are involved. The Reference in .0403(e) is specific to PE design. We have clarified the language in Rule .0403 overall to address this issue.
.0303	26	20	Add solids handling in addition to sewage pump		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. In our world, a sewage pump is also a solids handling pump. Sewage is defined in G.S. 130A-334(13) as both the liquid and solid human body waste . . ."
.0303	26	24	Add "except when pumps media dosing and recirculation pumping"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. This is the current language in the rule and has not been a problem. Additionally, if you have multiple pumps in one tank the system should be designed by a PE to ensure the design does not adversely impact either pump.
.0303			Section .0510 "Special Site Evaluations" should be appropriately incorporated into Sections .0303, .0304, .0305 "Licensed or Certified Professionals" for consistency and logical order to rule requirements. Title should appropriately reference Licensed Soil Scientists etc rather than just "Special Site Evaluations".	Section .0510 "Special Site Evaluations" should be appropriately incorporated into Sections .0303, .0304, .0305 "Licensed or Certified Professionals" for consistency and logical order to rule requirements. Title should appropriately reference Licensed Soil Scientists etc rather than just "Special Site Evaluations".	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. This is about site evaluation and not responsibilities and belongs in Section .0500. The responsibility to prepare the special site evaluation is included in Section .0300, but the details should be included in Section .0500.
.0303	27	1	Should NCBELS policy apply then?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Yes. We have met with NCBELS and agreed to criteria.
.0303	27	6	The LHD should not have the arbitrary discretion to require design by a licensed engineer. The rules should specify those requirements and this rule does so until this last arbitrary and discretionary requirement.	Recommend deleting 18E .0303 (b) (16).	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	The Local Health Department must have this discretion in cases where the nature of the site, system or other aspects of a project exceed their design expertise. We would welcome the opportunity to discuss specific situations our stakeholders have experienced. We can't solve problems we didn't know about and must rely on those reports to identify and resolve problems.
.0304	27	33 to 36	Which parts of G.S. 130A Article 11 apply as stated within this rule? Also state what essential information is to be provided by rule. Delete "…any other information determined to be applicable by the LHD or the State" as this is quite arbitrary.	Which parts of G.S. 130A Article 11 apply as stated within this rule? Also state what essential information is to be provided by rule. Delete "…any other information determined to be applicable by the LHD or the State" as this is quite arbitrary.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree and disagree. Removed reference to G.S. Provided examples of additional information that could be needed.
.0304	28	1	Make a form for submittal and complettion - one form		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. We have a form for submitting these requests.
.0304	28	22	Include "See guidance document Appendix XX"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. This rule codifies the information from that guidance. The guidance is readily available and carries no more weight if is referenced in the rules.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0304	28	22 to 23	Ksat measurements should be for major diagnostic soil horizons that could influence the performance of the proposed system. As written it is implied that Ksat measurements are being required for every soil horizon that may be described, and that the soil horizons within and above the dispersal field are not significant or would be tested.	Ksat measurements should be for major diagnostic soil horizons that could influence the performance of the proposed system. As written it is implied that Ksat measurements are being required for every soil horizon that may be described, and that the soil horizons within and above the dispersal field are not significant or would be tested.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree with concept, but made some modifications. The language in this Item has been modified to reflect the language in the current Ksat Guidance document. Horizons above the trench bottom/infiltrative surface will not normally have Ksat measurements conducted on them, since they are above the infiltrative surface and the effluent is expected to move in a downward direction. To our knowledge, there have not been any problems with language in the Ksat guidance document or interpretation issues.
.0304	28	28 to 30	Contaminant trasport assessment should only be required if non-domestic or high-strength industrial wastewater effluent is being proposed. The established buffer setbacks should already account for contaiminant transport concerns for domestic wastewater.	Contaminant trasport assessment should only be required if non-domestic or high-strength industrial wastewater effluent is being proposed. The established buffer setbacks should already account for contaiminant transport concerns for domestic wastewater. This distinction should be included within this rule.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. The introductory sentence includes "as applicable" which means it will be required on a case by case basis, depending on the site specific conditions and wastewater.
.0304	29	2 to 19	These appear to be engineering / surveying requirements and should not be numbered within this part of soils / site evaluation rules.	These appear to be engineering / surveying requirements and should not be numbered within this part of soils / site evaluation rules. Put these rules into the engineering / surveying parts of this rule. It is confusing as to what is required and by who??	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree
.0304	29	13	There needs to be some reference in the rules to analysis of the water table surface and the associated surficial aquifer. This can be only accomplished if the LSS, PE, or LG uses water level monitoring during the evaluation. Sufficient number of piezometers (water level monitoring wells) to define shape, gradients (slope), and direction of groundwater flow for potential mounding analysis calibration, fate of flow, and monitoring well location. These data points will need to be surveyed by a licensed surveyor.		Edwin Andrews, Edwin Andrews & Associates, PC, 10/30/2017	Disagree. We feel this issue, if it needs to be addressed, would be better addressed in a guidance document. This level of detail may not be needed on all projects and is specifically related to model calibration.
.0304	29	21	Define collection sewers and collection systems, different		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. A collection sewer is the same as a collection system. To clear up any potential confusion, collection system has been added to the definition of collection sewer.
.0304	29	22	Need clarification, profile diameter, length, supply lines, etc (provide a form)		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. The large system guidance document specifies the information required as due standard engineering construction drawings. We do not need to provide a form or additional information or clarification for this part of the rules.
.0304	29	37	Define a raw sewage lift station		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0304	30	10	Ventilation?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0304	30	15	Supply lines?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Supply lines are covered under piping.
.0305	31	6	less or equal 5000 not 3000		Glenn Hines, 10/29/2017	Disagree. During the previous draft rule revision, in the late 1990's and early 2000's, this design daily flow was proposed to be increased for coastal counties. Since that time we have re-evaluated whether or not it makes sense to increase (or decrease) this number. What makes the most sense is to leave it alone. The current system is working, and with the addition of the EOP, an owner or PE does not have to wait for OSWP review.

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.0305	31	7	less than or equal 5000 not 3000		Glenn Hines, 10/29/2017	Disagree. During the previous draft rule revision, in the late 1990's and early 2000's, this design daily flow was proposed to be increased for coastal counties. Since that time we have re-evaluated whether or not it makes sense to increase (or decrease) this number. What makes the most sense is to leave it alone. The current system is working, and with the addition of the EOP, an owner or PE does not have to wait for OSWP review.
.0401	31	21	THIS EXPANSION OF THE DESIGN DAILY FLOW CHART MAY MAKE IT EASIER FOR THE APPLICANT AND THE LHD TO APPLY CORRECT FLOWS. ALSO IMPRESSIVE IS THE INTRODUCTION OF MASS LOADING, WHICH HAS BEEN PROVEN TO IMPACT THE ACTUAL PERFORMANCE		Doug Lassiter, NCSTA, 10/24/2017	Thank you
.0401	31	22	I suggest adding wording that makes it clear this does not apply to vacation rentals. I think this was covered in an earlier version of this rule. Please review this.		Joe Lynn, 10/31/2017	Disagree. The coastal counties were not in favor of including this language anymore and we were also worried about trying to define and defend a habitable room.
.0401	31	24	This is a proper thought, but it may be unreasonable to think this will be included in the application for the IP or CA. How is the information related at the time a permit is issued?	Keep the permit application to number of bedrooms, but try to tie the design daily flow to something that can actually be verified as applicable.	Doug Lassiter, NCSTA, 10/2/2017	Agree. We can always ask on the application. If the owner says no, and later it turns into a vacation rental, at least we confirmed up front what the owner's intent was.
.0401	31	24	THE MODIFICATION IN THE PROPOSED RULES TO REQUEST IF THERE WILL BE MORE THAN TWO PERSONS IN A BEDROOM THAT THERE WILL BE AN ADDITIONAL 60 GPD PER PERSON IS NOT A BAD IDEA, BUT IMPLEMENTATION MAY BE IMPOSSIBLE	KEEP THE CURRENT FORMULA FOR DESIGN DAILY FLOW BASED ON TWO PERSONS PER BEDROOM.	Doug Lassiter, NCSTA, 10/24/2017	Agree. We can always ask on the application. If the owner says no, and later it turns into a vacation rental, at least we confirmed up front what the owner's intent was.
.0401	31	26 to 27	Is this separate 1 bedroom flow rule needed and what are its' justification? If this separate flow rule is necessary then incorporate it into .0401 (a).	Is this separate 1 bedroom flow rule needed and what are its' justification? If this separate flow rule is necessary then incorporate it into .0401 (a).	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree
.0401	31	26 to 27	Need sentence within this subsection referencing and highlighting the allowance of calculated flow reduction based upon data, in Section .0403 and as mandated by S.L. 2017-10 Section 3.18.	Need sentence within this subsection referencing and highlighting the allowance of calculated flow reduction based upon data, in Section .0403 and as mandated by S.L. 2017-10 Section 3.18.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. The low-flow language in S.L. 2017-10 is for public water supply systems (15A NCAC 18C), not onsite wastewater systems (15A NCAC 18A). Additionally, S.L. 2013-413 and S.L. 2014-120 are covered in Rule .0403.
.0401	32	3	Add "water treatment system back flush line"		ABCD Construction, 9/14/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Andrew Daywalt, 9/25/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Ben Hildreth, 9/25/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Agree
.0401	32	3	Please note that condensate from HVAC and ice machines can often prove beneficial when directed to grease traps to cool dishwasher and kitchen discharges. This rule prohibits what could be a beneficial application. The discharge should be allowed when properly designed.		Bill Fenner, Aquapoint, 10/29/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Brian Beebe, 10/23/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Cable Septic and Backhoe Service, 10/23/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Charles Dodge, C&C Septic Services, 9/25/2017	Agree

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.0401	32	3	Add "water treatment system back flush line"		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Charles Driggers, Driggers Septic Tank, 9/25/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Charlie Brice, 9/25/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Chris Hedrick, 9/25/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Chriscoe Bacchoe Service, 10/23/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Daniel Newsome, D&D Organic Farming, 10/24/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Danny Dennis, 10/23/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		David Murphy, DRM, 10/24/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Donald Martin, 10/23/2017	Agree
.0401	32	3	THE BIGGEST CULPRIT FOR ADDING FLOWS OUTSIDE THE FORMULA FOR PER BEDROOM IS THE DISCHARGE FROM THE WATER SOFTENER. THIS SHOULD BE DIRECTLY MENTIONED.	ADD "WATER TREATEMENT SYSTEM BACKFLUSH"	Doug Lassiter, NCSTA, 10/24/2017	Agree
.0401	32	3	The specific items mentioned should include the mchange that maybe impacts the wastewater system the most, the back flush from the water softener.	Add water treatment system back flush line.	Doug Lassiter, NCSTA, 9/20/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Garland Walker, 10/23/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Gerald Leonard, 10/23/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Hank Hill Grading, 10/23/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Harry Hatcher, 9/25/2017	Agree
.0401	32	3	Conflict with 130A-345?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Language has been modified to allow the wastewater system to include these flows if the system has been specifically designed for this wastewater.
.0401	32	3	Add "water treatment system back flush line"		Jeff Link, Rowan, LHD, 9/25/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Jerry Pearce, 9/15/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Johnny Strickland, 10/23/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Kearns Pumping Service, 10/23/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Keith Blackburn, B & C Concrete, 9/20/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Kippy Blanks, 9/28/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Larry Beam, 9/23/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Lawrence Henning, 9/15/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Lester Breedlove, 10/23/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Mark Johnson, 10/23/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Marty Maness, 10/23/2017	Agree

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.0401	32	3	Add "water treatment system back flush line"		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Michael Barger, 9/25/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Parrish Homes and Pools,Inc, 10/23/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Pat Rentz, VIP Inspection Services, 9/25/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Perry's Grading & Septic Service, 9/14/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Randy Lackey, Love Valley Septic, 9/25/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Ronnie Burgin, 9/25/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Russell C. Trodgon, 9/18/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Russell Lineberry, 10/23/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Sterlin Church, Church's Backhoe Service, 9/25/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Steve Cannon, Rowan LHD, 9/25/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Terry Maples, 10/23/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		TM Grading, Inc, 10/23/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Tyler Jolley, 9/15/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Valentina Oxendine, 10/23/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Vince Scroggins, 9/14/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Agree
.0401	32	3	Add "water treatment system back flush line"		Willilam Garrison, EcoClean Septic, 9/25/2017	Agree
.0401	32	3 to 4	Shall not" removes any flexibility for the designers.	"...unless specified by a P.E. or approved by the State." at times it is nice to put ice machine drainage into the grease trap or septic tank to lower the temperature for restaurant system.	Joe Soulia, Orenco Systems, 10/31/2017	Agree
.0401	32	3 to 4	Shall not" removes any flexibility for the designers.	"...unless specified by a P.E. or approved by the State." at times it is nice to put ice machine drainage into the grease trap or septic tank to lower the temperature for restaurant system.	Steve Barry, AQWA, 10/31/2017	Agree

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.0401	32		I talked to Trish at the On-Site conference about the design criteria for campgrounds and I understand the thought process for not changing the 120 gal/day/site. I wanted to suggest that there be added equalization storage tankage/space equal to the design daily flow. For example if the daily flow is permitted at 6000 gal/day there should be 6000 gallons of equalization space on hand. I manage a campground that does not have storage capacity and when everyone leaves at the same time (as they do on Sunday & the last day of holidays) the flow overruns the system capacity and washes out the biological activity. If the storage space were required as part of the design flow the increased cost would not be as much to the owner as it is after the fact. Please consider adding this to the design criteria required for these and possibly other systems.		Alan Gaddis, AG Environmental Management, LLC, 10/26/2017	Agree with comment, but it would be difficult to require all campgrounds to utilize flow equalization. Not all campgrounds are used the same throughout the state. The option is always available for flow equalization to be used. That is frequently suggested up front to the owner for facilities that may be used only a few days a week.
.0401	32		Please note that there is no guidance for dump stations at Trailer/RV parks & campgrounds. Guidance for this design flow may be needed.		Bill Fenner, Aquapoint, 10/29/2017	Agree. Guidance for designing a dump station has been included in the RV Guidance Document.
.0401	32		Event Center – We have been sizing event centers at 5 gpd/person with no food preparation. I am curious as to how the current proposal is for 5 gpd/person with a full kitchen. Food service facilities are sized at 5 gal/meal served with multiuse articles. That does not include party-goers eating, drinking and dancing for hours. I think more design flow is needed for event centers. If this rule is passed, can the existing event centers come back and request that we double their occupancy based on the new rules? I also have a question about the footnote that the designer may alternately use the maximum building occupancy assigned by the fire marshal to determine the flow. I have found that what applicants request from us can vary widely from the building occupancy. It seems it should be one way or the other. The fire marshal can post a building occupancy of 400 people when the system was designed for 200. That seems contradictory. Of course in some situations, the "building" is a tent that is being set up for the event, so it would be difficult to address the occupancy unless we specified a maximum tent size on the OP. If it is a pretty day, the tent is basically a moot point!		Kim Warren, Chatham County Health Dept, 10/30/2017	Agree and agree. Have modified text on both topics.
.0401	32		Day care facilities – 15 gal/person with no food preparation. How do you define food preparation? What does one do in a warming kitchen? A warming kitchen sounds to me like a domestic kitchen with no dishwasher. I believe many people prepare food and meals in domestic kitchens. If the day care does prepare food, are the kitchen wastes handled separately as a food preparation facility? Food stand with up to eight seats – If the food stand has up to eight seats, it is not a food stand unless it falls under Senate Bill 7 (S.L. 2015-104). According to the state's position statement: "This applies to all sewage disposal systems approved to serve "existing" permitted food stands. "New" food establishments that include seating qualify as a restaurant and the associated sanitary sewage disposal system shall be designed in accordance with 15A NCAC 18A .1900 et seq." My interpretation of the preceding statements is that if a newly permitted food stand, permitted since the passage of Senate Bill 7, wants to add seats that it must comply with the restaurant rules and requirements.		Kim Warren, Chatham County Health Dept, 10/30/2017	Have modified the day care facilities description to remove warming kitchen and food preparation. And yes, you are correct in the second part of your comment. We chose to modify the rules to include new food stands as well as existing food stands.

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.0401	32		Beauty Shop – 125 gal/per chair, booth, or bowl Too many options – need to specify which item or items to use. May have 2 bowls with 6 chairs???? Chairs regulate how many operators.		Len Gilstrap, Carteret LHD, 10/31/2017	Agree
.0401	32		Markets – define what markets are		Len Gilstrap, Carteret LHD, 10/31/2017	Agree with modifications
.0401	32		Do not agree with the design daily flow for RVs and park models in the proposed rules. Recommend using the nationally recognized standard, NFPA 1194, as the design daily flow for RVs.		Michael Hobby, Campground Owners in NC, 10/2/2017 and 10/4/2017	Agree with modifications
.0401	32	32	water softener device adds		Glenn Hines, 10/29/2017	Agree
.0401	33		Flow for food establishments, pretty substantial increase in flow for restaurants, big increase from 40 gpd/seat, thought those numbers were on the high side.		Bill Fenner, Aquapoint, 10/2/2017	Agree
.0401	33		Table II, Food Establishments with multi-use articles, etc, enforcement will be very difficult in not untenable.		Joe Anlauf, Anlauf Engineering, PLLC, 10/17/2017	Disagree. That will be part of the permit and part of the food facility inspection done by the LHD. If the facility changes which type of articles it uses, it is a violation of the permit
.0401	33		Motels/hotels – define cooking facilities – not microwave and mini fridge intended?		Len Gilstrap, Carteret LHD, 10/31/2017	Agree and made modifications
.0401	34		Day Care facilities: Clarification would be great to how to size day care facilities that have more than the "Warming Kitchen" or that have laundry in the facility. The Warming kitchen definition specifies; handwashing sink, domestic 2 compartment sink, heating appliance, and a refrigerator. What would be the design flow if a child care center has more than the domestic 2 comp. sink (commercial 2 comp. sink, 3 compartment sink or vegetable washing sink, etc.) or more than 1 refrigerator (2 or more refrigerators and/or a freezer). Also, most day care facilities in our area have laundry machines that are provided in the day care center.		David Swinney, ARHS, 10/31/2017	We have language regarding how to address laundry. We have removed the language regarding food preparation and a warming kitchen. We have clarified language in definitions for full kitchen and warming kitchen that may help with sizing.
.0401	34		Wake County supports the flows for rest homes		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Thank you
.0401	34		8 hour shifts, multiply by two		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. We believe the numbers reflect what we are currently seeing with a safety factor.
.0401	35		Under Institutions: Churches and Public or private assembly halls. Break out churches and any appurtenances associated with religious facilities into one category. If specifying Sanctuary for church – say Sanctuary not Church. Churches and other religious institutions Sanctuary only – 2 gal/seat With warming kitchen – 3 gal/seat With full kitchen - 5 gal/seat Assembly hall or family life type centers – add 2 gal/ building occupancy.		Len Gilstrap, Carteret LHD, 10/31/2017	Agree
.0401	36	1	How will the LHD determine if building occupancy or the flow per unit should be used to determine the design daily flow. Please clarify which number should be used.		Daniel Allen, Carteret LHD, 9/20/2017	Agree and have modified text
.0401	36	1	above 12-gallon student is too high for school		Glenn Hines, 10/29/2017	Disagree. This number also includes teachers and other staff, so by the time the number is broken down to per person, it is a much lower value.
.0401	36	3	Table II appears appropriate for design daily flow, and the sites identified by the ** appear to be sites that have the potential of generating higher levels than found in Table III of 15A NCAC 18E .0402. Without the information of what the actual sizing and technology may be required for those sites, this simple design daily flow is misleading and comes up many times to frustrate the owner and the LHD.	Amend the table, with the site (facility) description, then the design daily flow, followed by reference to the high strength check-off. The asterisk should then refer to the subsection on organic loading so that the permit application is correctly identified.	Doug Lassiter, NCSTA, 10/2/2017	Agree

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.0401	36	3	TABLE III HAS DETAILED A GREATER NUMBER OF FACILITIES WITH DESIGN DAILY FLOWS, BUT THERE SHOULD BE A BETTER WAY OF NOTIFICATION FOR HIGH-STRENGTH FACILITIES INSTEAD OF A DOUBLE ASTRISK.	GIVE SOME CITATION OF >RESIDENTIAL STRENGTH WASTEWATER AND GIVE MORE DETAIL INTO THE MASS LOADING FORMULAS THAT MAY BE USED.	Doug Lassiter, NCSTA, 10/24/2017	Agree
.0402	36	10	Effluent means the liquid discharge from a pretreatment component. For domestic strength effluent use the following: BOD - 250, TSS - 125, TN - 60, FOG - 30, ST-out o rST-in, what is thought here		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. The effluent quality standards are based on the average septic tank effluent strength in North Carolina.
.0402	36	15	Exceed every parameter or any parameter? FOS is met by GT and BMP, up to 40% TSS and BOD is reduced by using additional ST and effluent filter, simply reduction using N 40%. Remove 1,500 gpd. What triggers needing DSE data other than ADF?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Exceed any parameter. We have clarified this language in the rules. Disagree with the percentages for reduction shown in the comment. For restaurants or schools, it is not just a matter of having the retention time. More action is needed to treat the wastewater.
.0402	36	15	In the event of a flow reduction		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. However, we have modified the language in this Rule.
.0402	36	15	This appears to attempt to force all commercial uses with a design flow over 1,500 gpd into advanced treatment unless tedious and expensive nutrient migration and mass loading anaysis is performed. What happened to 3,000 gpd? How about taking a page or two out of the NCAC Subchapter 02T rules and incentivise the use of advanced pretreatment. Less stick more carrot.		Joe Anlauf, Anlauf Engineering, PLLC, 10/17/2017	Agree and disagree. This is our way to address the issue of wastewater strength. We are proposing lower design daily flows based on the current use of low-flow fixtures, but are not addressing the issue of wastewater strength. If the designer can determine wastewater characteristics and show that the strength will not be a problem, that is their option.
.0402	36	15 to 16	Appreciate that pretreatment is not being required for flows less than 1500 gpd--that would be onerous for small restaurants and similar small businesses.		Connie Adams, Caldwell LHD, 10/31/2017	Thank you
.0402	36	16	What is a "licensed consultant", what are their qualifications and their accountability to their client, the State, etc?	Provide clarity or amend the term "licensed consultant" to only include the professional fields that have been included.	Doug Lassiter, NCSTA, 10/2/2017	Agree
.0402	36	19	MENTION OF A "LICENSED CONSULTANT" IS NOT FOUND IN THE DEFINITIONS AND THE QUALIFICATIONS ARE NOT MENTIONED IN THE PROPOSED RULES.	ELIMINATE "LICENSED CONSULTANT" OR DEFINE WITH STATE-APPROVED QUALIFICATIONS IN DEFINITIONS.	Doug Lassiter, NCSTA, 10/24/2017	Agree
.0402	36	19	THIS SUBSECTION ALLOWS THE LICENSED CONSULTANT THE ABILITY TO JUSTIFY NOT USING ADVANCED PRETREATMENT AND IS AN EXCELLENT EXAMPLE OF PERFORMANCE OPTIONS.	KEEP ALLOWING OPTIONS FOR OBTAINING DESIRED PERFORMANCE. IT'S THE END OF PIPE RESULT THAT'S IMPORTANT. DOES "LICENSED CONSULTANT" DESIGNATION COME WITH LISTED QUALIFICATIONS.	Doug Lassiter, NCSTA, 10/24/2017	Thank you and agree
.0402	36		Table III should clarify that the values listed are raw sewage values and not settled sewage.		Bill Fenner, Aquapoint, 10/29/2017	Disagree. The values in Table III are peak septic tank effluent quality standards are based on the septic tank effluent strength in North Carolina.
.0402	36		"Effluent quality standards"	"Septic tank effluent quality..." There is no good or efficient way to take a sample of influent into a septic tank. Certainly not from a gravity line...strength depends on who's in the bathroom if you get my drift. A sample near the outlet filter or preferably a falling sample after the filter is most accurate and practical.	Joe Soulia, Orenco Systems, 10/31/2017	Agree
.0402	36		"Effluent quality standards"	"Septic tank effluent quality..." There is no good or efficient way to take a sample of influent into a septic tank. Certainly not from a gravity line...strength depends on who's in the bathroom if you get my drift. A sample near the outlet filter or preferably a falling sample after the filter is most accurate and practical.	Steve Barry, AQWA, 10/31/2017	Agree
.0403	37		The adjustments to design flow should apply only to the sizing of the dispersal/disposal component of a system. The treatment components should be designed based on the non-adjusted flows. This will assure adequate treatment components are in place to treat the actual flows and allow the reduction of the drainfield size requested by the designer. If it becomes necessary to treat larger actual flows than anticipated, drainfields can be expanded much easier than treatment components.		Bill Fenner, Aquapoint, 10/29/2017	Agree and that is addressed in Rule .0403(g).

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.0403	37		.0403 Adjustments to Design Flow: this section adds tremendously to the benefit of the rule proposed.		Bob Rubin, NCSU, 10/26/2017	Thank you
.0403	37		Multiple concerns regarding which paragraphs of this rule address non-residential and residential flows. What applies to non-residential and residential? What applies to existing or new facilities? The SL includes residential and the system designed by a PE. Does this also include existing systems?		Len Gilstrap, Carteret LHD, 9/20/2017	Agree and have tried to clarify the language in this Rule.
.0403	37	6	Define adjusted design daily flow		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Design daily flow is defined, so adjusted design daily flow should be easily understood.
.0403	37	6	For initial flows less than or equal to 3,000, submitted by others or own design?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0403	37	11	ADF for existing systems, capacity expansion, fully developed?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree. This language allows for different options to propose an adjusted design daily flow so that the owner may optimize their wastewater system capacity.
.0403	37	14	Not less than 1.0		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0403	37	20	"Conventional fixtures" - This hsould be above and beyond required fixtures per current plumbing code.		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. This language is from the Session Law and is based on the fixtures that are currently in the facility and the new fixtures proposed for the facility.
.0403	37	21	Required to be provided by a P.E? Who takes responsibility?		Len Gilstrap, Carteret LHD, 10/31/2017	Responsibility is taken by the designer, whoever they may be (PE, etc).
.0403	37	26	Unclear whether the S.L. is specific to proposed or existing systems. We've only seen it used on existing residential systems. Does this include single family residential systems? The Guidance document seems to indicate that systems permitted under the S.L. are required to be designed by a P.E.. Does that mean non-engineered systems can't use the S.L.? Does this only apply to systems designed in compliance with the design flows in the rules? For example, a repaired system may not have adequate space for the full design flow and therefore under designed – would this be exempt from low flow engineering? Making these items clearer would be helpful.		Len Gilstrap, Carteret LHD, 10/31/2017	Agree and have clarified language.
.0403	38	1 to 2	Sentence should state: "neither the State nor any LHD shall be liable for any resulting damages caused from increased / decrased flow rates or effluent strength by a system properly approved or permitted in accordance with this Paragraph."	Sentence should state: "neither the State nor any LHD shall be liable for any resulting damages caused from increased / decrased flows or effluent strength by a system properly approved or permitted in accordance with this Paragraph."	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. Language is identical to that provided in the Session Laws.
.0403	38	9 to 10	Shouldn't tank size be include within this requirement?	"The design daily flow from Table II shall be used to determine minimum tank and pretreatment component capacities."	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree
.0501	38	35	Define pit?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree By defining a pit we make it too restrictive and all sites may not be able to have the same type of pit dug (hand dug pits in the mountains).
.0501	38	36	Sometimes it is necessary to describe soils to greater depths to achieve 36" trench depth, in saprolite, and steep slopes.	"(c) Soil profiles shall be evaluated to the following minimum depths: "	Connie Adams, Caldwell LHD, 10/31/2017	Agree
.0501	39	1	On the other hand, if I am permitting a site for drip, is it really necessary to evaluate all the way to 48"?	add: "(3) to a depth 24" below the proposed infiltrative surface"	Connie Adams, Caldwell LHD, 10/31/2017	Disagree. We teach the LHDs to evaluate to a depth of 48 inches or to a limiting condition. So, if you stop too soon, you may not know the soil type that is located below a potential limiting layer. We want to be able to provide the owner with all options available.
.0501	39	2	"The owner may be required to make provisions to …"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree

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.0502	39	22	Up to 30% is considered suitable may be considered suitable up to 65% on a case by case basis.		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. We have eliminated the provisionally suitable classification, and a site is either suitable or unsuitable. A site that is unsuitable may hire a consultant to propose options.
.0502	39	21-22, 25-26	Need statement of modification to these unsuitable topographic parameters.	(b), (c), (e) need statement on end of each sentence stating ":..... unless this site parameter can be modified through special site evaluations and/or engineered design." Otherwise the unsuitable classification cannot be addressed or overcome.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree. However, this is addressed in Rule .0509 and specifically Paragraph (e).
.0502	39 & 40	32-37, 1-2	There has to be a minimum slope % parameter where this requirement is not necessary such as ≤5%. Level to nearly level and convex slopes have little site variation as to depth or need for a slope correction. Is this requirement even needed, since the waste treatment and repair area are already evaluated specifically for usable soil depths??	There has to be a minimum slope % parameter where this requirement is not necessary such as ≤5%. Level to nearly level and convex slopes have little site variation as to depth or need for a slope correction. Is this requirementeven needed, since the waste treatment and repair area are already evaluated specifically for usable soil depths??	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. At-grade or shallow placed systems need slope correction. Even with a 2% slope on a site with only 24 inches, we have to ensure that we don't infringe on our 12 inches of vertical separation to soil wetness or other limiting condition.
.0503		All	The numbering & sub-numbering within this section appear to be inconsistent with other sections of the rules.	The numbering & sub-numbering within this section appear to be inconsistent with other sections of the rules.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	The numbering is different based upon the content of the rule. The fours items listed (texture, structure, clay mineralogy, and organic soils) relate to soil morphology and are listed under the introductory sentence.
.0503			Statements regarding suitability determination are inconsistent, sometimes included, sometimes not, sometimes a maximum, sometimes a minimum, sometimes with effluent strength indicated. Suggest that a consistent format be used in all of these sections, or that one statement regarding suitablity based on these criteria be made in .0509. It may be that .0509 (b) would be adequate.		Connie Adams, Caldwell LHD, 10/31/2017	Agree
.0503	40	19	Allow the “applicant” to also substitute laboratory determination of soil texture and rule would read as follows; “In place of field testing, the LHD, the applicant or the State may substitute laboratory determination of the soil texture class when conducted in accordance with ASTM D6913 and D7928”. With adding the Applicant, then also add the following; When laboratory testing of soil texture is proposed by the applicant, the LHD shall be notified 48 hours before samples are to be collected by the licensed professional representing the applicant, in accordance with G.S. 89C, G.S. 89E, G.S. 89F. Samples shall be representative of the soil horizon being evaluated for texture. Split samples shall be made available to the LHD when requested. This would be consistent with other similar rules for submitting lab samples.		Don Wells, S&EC, 10/23/2017	Agree
.0503	40	19 to 20	Modification to sentence is needed for clarification of texture parameter.	Modify to: "In place of field testing the LHD, State, or licensed / professional consultant may substitute laboratory determination of the soil textural class when conducted in accordance with ASTM D6913 and D7928 which will take precedence over qualitative field testing."	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree with modifications. Licensed professional terminology will be consistent across rules. In place of field testing, lab testing may be substituted.
.0503	40	19 to 20	In place of field testing, may substitute lab testing.	Allow the applicant to request lab testing, not just the LHD or the State.	Jim Beeson, Piedmont Environmental Associates, PA, 10/2/2017	Agree
.0503	40	21	Allow site testing for determining the site loading rate as follows; “Where sites are Unsuitable with respect to soil structure, it may be classified Provisionally Suitable after a special investigation indicates that a modified or alternative system can be installed in accordance with rules.”		Don Wells, S&EC, 10/23/2017	Disagree. We have eliminated the provisionally suitable classification, and a site is either suitable or unsuitable. A site that is unsuitable may hire a consultant to propose options.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0503	40	21	Recently, the Regional representatives for the State have described soil as having compound structure. In many cases, the compound structure has included both unsuitable and suitable soil structure. As it is in this rule, both unsuitable and suitable structure can exist. The mentality that the unsuitable characteristic should always yield to in this case would not take into account the scientific processes that had to have been present to form the suitable structure.	In my opinion, soils with compound structure should be used if the smaller structure is suitable. Most of my experience has been with agricultural settings where platy structure parts to sub-angular blocky structure. The agricultural process has altered water movement both into and out of the soil horizon. I would hope that some inclusion of which structure would outweigh the other would be mentioned in the rules.	Jim Beeson, Piedmont Environmental Associates, PA, 10/2/2017	Disagree. Field experience with platy structure indicates premature failure of the wastewater system. Compound structure cannot be broken down before system installation.
.0503	40 & 41	19-20, 1-2	Soil structure parameters are overly restrictive and should have more allowances.	-------Structure size for Blocky and Prismatic class should be >2 - 4 inches for suitable classification. Structure criteria is to infer soil conductivity and LTAR can always be lowered to meet this limitation. Need Ksat testing statement added to evaluate any suspected unsuitable structure classification, especially for saprolite and massive soil conditions. -------- If compound structure condtions are encountered where one is unsuitable the dominant structural type should determine classification as to suitability, and if questionable lower LTAR, or verify structure and matrix permeability through Ksat testing.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. USDA-NRCS has a greater number of classifications than what is listed in the rules. We have not had any problems with the current structure breakdown that would indicate we need to change.
.0503	40 to 41	21 to 3	Suggest that section on structure reference the USDA-NRCS Field Book for Describing and Sampling Soils. This will provide uniform guidance across the state for this characteristic.		Connie Adams, Caldwell LHD, 10/31/2017	Disagree. USDA-NRCS has a greater number of classifications than what is listed in the rules. We have not had any problems with the current structure breakdown that would indicate we need to change.
.0503	41	4	Expansive Mineralogy. I feel there should be another option for clay soils that are not formed from residuum. For example many coastal and mountain soils are classified as having mixed mineralogy. However this mixed mineralogy is not necessarily from expansive minerals. The mineralogy is from the colluvium from which the soils are formed. Mixed mineralogy meaning not more than 50% of any one mineral.		Alan Clapp, LSS, 10/24/2017	Disagree. Our current procedures include evaluation of consistence (field and/or lab) as well as structure and this reference is not something we hear about as a problem. Licensed professionals have the option to justify permits based upon 18A.1948(d)/18E .0509(f). It would be great to have data justifying use of a broader range of soils.
.0503	41	11	when laboratory results for CEC are between 16 to 24 milliequivalents/100 grams of clay, allow site testing for determining the site loading rate as follows; Where sites are Unsuitable with respect to Clay Minerology, it may be classified Provisionally Suitable after a special investigation indicates that a modified or alternative system can be installed in accordance with rules.		Don Wells, S&EC, 10/23/2017	Disagree. We have eliminated the provisionally suitable classification, and a site is either suitable or unsuitable. There is no scientifically justified method for overcoming expansive mineralogy.
.0503	41	29 to 30	Chroma 2 or less colors can also result from organic matter in A horizon and not reflect soil wetness. In Soil Taxonomy, one way this is handled is to specify chroma 2 or less and value of 4 or more. This excludes common A horizon colors like 2/2 or 2/3 that do not indicate wetness.	"Colors of chroma 2 or less that are lithochromic or due to organic matter in A horizon shall not be considered indicative of a soil wetness condition."	Connie Adams, Caldwell LHD, 10/31/2017	Agree with the concept, but it is difficult to write a rule to distinguish between these two site conditions. The rule gets very complicated very quickly. Will leave the rules as they currently are regarding this issue.
.0503	41 to 42	11 to 3	Will this rule prevent possible future improved techniques for CEC determination from being used?		Connie Adams, Caldwell LHD, 10/31/2017	No

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0503	41 & 42	4-14, 1-13	We received several comments on Clay Mineralogy parameter especially as to CEC testing methodolgy. The technical standards for determining site usability definitely need review.	CEC is an unreliable test indicator for shrink / swell mineralogy potential and site usability for waste treatment systems. For the same sample CEC testing is quite variable within and between labs. Post testing of CEC of sites approved by the qualitative method alone have shown CEC of +16 meq/100 grams. We recommend the following: ---CEC test results be allowed up to 24 meq/100 grams rather than the current 16.3 meq/100 grams, which still is within taxanomic "subactive" clay mineralogy classification vs. "semiactive to superactive" classification; ---Long-term Ksat testing for 24 - 48 hr durations should be allowed to determine if steady-state can be achieved with positive results and used as basis for site usability and final LTAR calculation; ---Large marginally usable areas should be considered with <<LTAR rates (<0.10 gla/daysqft) and alternative systems; ---Allow usage of COLE and Atterberg testing to be included as further supportive tools in the evaluation for final suitability determination.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. Stan Buol has advised the department that 16.3 meq/100 grams is 10% expansive mineralogy. Until other scientific literature is available to dispute this value, we will continue to use this value. The Attorney General's office will only defend one number, not a range.
.0503	42	5	Table VII shows that soils with an apparent CEC of 16.3 milliequivalents or more per 100 grams of clay, than the soil shall be classified as unsuitable. Soil with this, the lowest class of clay activity, are classified as kandic. Three other groups also appear in soil taxonomy, which are "subactive", "semiactive", and "superactive".	I would propose that if all other soil characteristics are either suitable or provisionally suitable that clays that have between 16.3 and 24 milliequivalents per 100 grams of clay (subactive) be usable and the LTAR be established with additional testing, such as KSAT results.	Jim Beeson, Piedmont Environmental Associates, PA, 10/2/2017	Disagree. There is no scientifically justified method for overcoming expansive mineralogy.
.0503	42	14	Organic soils are no different than a peat pretreatment system. If all other site conditions are suitable, then orgainc soils should not be deemed unsuitable for any usage solely because of their organic content. Granted the number of natural sites will likely be minimal, but the sites should not be discriminatorily eliminated solely due to organic content of the soil.	If all other site parameters are determined to be suitable then organic soils should be suitable for a conventional or alternative waste treatment system. Organics have shown to be a very effective median for treatment and retention of bacteria, viruses, nutrients, heavy metals, etc and likely better than most sterile mineral soil types.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. Although the material used for peat filters and other naturally occurring soils, meeting the current defined organic soil characteristics, would both be classified as organic soils, the hydraulic properties of fibric versus sapric Histosols is distinctly different. Additinally, the fibric materials which are mined and processed for peat filters are subject to extensive quality control and by their very physical properties can retain their hydraulic properties and durability subsequent to disturbance and handling.
.0504			Statements regarding suitability determination are inconsistent, sometimes included, sometimes not, sometimes a maximum, sometimes a minimum, sometimes with effluent strength indicated. Suggest that a consistent format be used in all of these sections, or that one statement regarding suitablity based on these criteria be made in .0509. It may be that .0509 (b) would be adequate.		Connie Adams, Caldwell LHD, 10/31/2017	Agree and have added language to rules to clarify what is suitable, unsuitable, and how advanced pretreatment siting criteria ties in.
.0504	41	29 to 30	Chroma 2 or less colors can also result from organic matter in A horizon and not reflect soil wetness. In Soil Taxonomy, one way this is handled is to specify chroma 2 or less and value of 4 or more. This excludes common A horizon colors like 2/2 or 2/3 that do not indicate wetness.	"Colors of chroma 2 or less that are lithochromic or due to organic matter in A horizon shall not be considered indicative of a soil wetness condition."	Connie Adams, Caldwell LHD, 10/31/2017	Agree with the concept, but it is difficult to write a rule to distinguish between these two site conditions. The rule gets very complicated very quickly. Will leave the rules as they currently are regarding this issue.
.0504	42	20	Incorporate use of IRIS tubes for determination of soil saturation height.		Alan Clapp, LSS, 10/24/2017	More information is needed regarding this method to be able to include this as an option in the proposed rules.
.0504	42	31	3 days is way too short to observe water in soil. I proposed to replace the current “3 days” with 120 days to parallel site monitoring as described in procedures in section (e) of soil wetness rules. This is consistent with other sections of this rule.		Don Wells, S&EC, 10/23/2017	Agree and have proposed revised language.

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.0504	42 to 43	31-33, and 1-2	The direct observation of water in a bore hole for 3 consecutive days to determine a "Soil Wetness Condition" needs removal from these rules. We have had conflicts with LHD's over this rules due to heavy rainfall conditions on lots with no soil morphological indicators of a perched or SHWT up here in the Piedmont. This rule is too vague and if enforces creates a huge problem for LSS mapping sites for future subdivisions since we are evaluating the land on soil properties with restrictive characteristics along with unsuitable landscape positions.	Total removal from the rules, use the current soil restrictive characteristics for SHWT and/or Perched water table.	Jason Hall, Central Carolina Soil Consulting, 10/30/2017	Agree and have proposed revised language.
.0504	42 to 43	31-33, and 1-2	This amount of time is too short. Imagine if a hurricane hits eastern North Carolina. This rule would prohibit the use of the majority of land across the State that were evaluated with this for the following weeks. This rule was not founded on any scientific basis and can only hinder any scientific process that would determine the true SHWT. Is the State willing to also agree that if gray mottles do occur and the water level within a borehole or excavation does not contain perced water for three consecutive days that the soil could be used?		Jim Beeson, Piedmont Environmental Associates, PA, 10/2/2017	Agree and have proposed revised language.
.0504	42 to 43	31-33, and 1-2	Perodic observation of a water table for durations of 3 days is too short. There is no logic or scientific basis for this duration and totally ignores ambient wetness conditions or successive rainfall events.	If periodic observations of a water table are to be conducted they should be during ambient wet site conditions, after a significant rainfall event of >0.5 inches without additional significant rainfall events occurring for a time period of >3 - 14 consecutive days to be consistent with curently established parts of this rule.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree and have proposed revised language.
.0504	43	5 to 8	Do you intend to consider sites with SWC between 12-18 inches suitable? Why? Contradicts .0509 (b). I also think this should go after the alternative procedures--it shouldn't matter how SWC is determined as to depth for suitability.	"Site Suitability as to Soil Wetness: Sites where the soil wetness condition is less than 18" below the naturally occurring soil surface shall be considered unsuitable with respect to soil wetness. Sites where the soil wetness condition is 18" or more shall be considered suitable with respect to soil wetness." (additional language for group I soils may be needed) (locate after (g) or (h))	Connie Adams, Caldwell LHD, 10/31/2017	Agree
.0504	43	6 to 8	Rule should also include "....where soil wetness condition is less than 18 inches from an existing fill surface shall be considered unsuitable with respect to soil wetness".	Rule should also include "....where soil wetness condition is less than 18 inches from an existing fill surface shall be considered unsuitable with respect to soil wetness".	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree
.0504	44	18 to 19	Sentence needs to be modified to allow greater flexibility for accurate rainfall data collection. Many rain guage stations have been added to the NOAA and NC monitoring data base that need to be taken advantage of for accuracy, consistency, and validity rather than just an on-site gauge.	Modify sentence: A rain (precipitation) guage is requied within a 10 mile radius of the site.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree with modifications
.0504	44	9 to 10	Sentence should be modified.	Modified sentence: If the plan is disapproved, the authorized agent shall include specific changes and technical justifications for approval of the monitoring plan.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree with modifications
.0504	44 to 45	21-37, and 1-13	The WRI rainfall method needs to be replaced with the 30 - 90 day running / moving average method for actual rainfall wetness conditions bracketed within 30 - 100% of normal rainfall. Many NOAA references available on this and used by climate analysts. It is standard practice for ambient rainfall and wetness conditions. The WRI method has never worked well, not peer reviewed, and poorly referenced.	The ultimate benchmark to be achieved is for water table monitoring and analysis to coincide with the depth to chroma 2 wetness indicators. Now is a good time to correct this rule.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree. An alternate method has been proposed.
.0504	45	17 to 18	Sentence needs to be modified for methodolgy, data, and accuracy.	Modify the sentence: If monitoring well data is collected during monitoring periods that span multiple years, the year which yeilds the most representative soil wetness condition shall be applicable based upon the data and methodology utilized.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. The term "most representative" is very broad and would be open to wide interpretation of what is "most representative".

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.0504	45	19	There is reference to DRAINMOD as the tool for soil wetness predictions. At this time, I agree that this should be preferred in North Carolina. However, there are other simulation algorithms that provide the same analytic capabilities with other benefits. These are in two groups, based on computational algorithms, which are Finite Element and Finite Difference models. An example of a Finite Element model is FEFLOW (predominantly European), which associated with MIKE (river, estuarine, and other surface adaptation simulations) can refine the temporal (time vs historical rainfall . . .) relationship analyzed in DRAINMOD laterally to complex surface (drains, creeks, seeps, etc) geometries as the site and neighboring areas change. An example of a Finite Difference model is the USGS MODFLOW, which associated with SURFACT, can also refine the relationahip analyzed in DRAINMOD, lateralllly to include complex surface (complex drains, creeks, seeps, etc) geometries as well as changes of aquifer characteristics. Basically, with today's computer technology, it would be simpler to use DRAINMOD as a primarily transient analysis. Complex transient and spatial analyses such as MODFLOW and FEFLOW may be too cumbersome to run on today's computers. However, at the rate computing technology is changing, there should be flexibility to use these and other future models.		Edwin Andrews, Edwin Andrews & Associates, PC, 10/30/2017	Agree and added a Paragraph specifying that other modeling programs can be proposed on a site specific basis.
.0504	45	21-26	Criteria for the water table moitoring / modeling procedure need to be simplified for better accuracy, consistency, and data collection.	This part of the water table monitoring / modeling procedure needs to be simplified for testing conditions as follows: ---Rainfall can be recorded daily, not hourly as currenlty required by this rule; ---The water table monitoring time period can be conducted during any >3 month ambient wet time period with >2 water table fluctuations occurting at or above estimated or projected seasonal high water table level.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree with modifications
.0504	46 to 47	33-37, 1-3	Criteria for modeling procedure needs to be modified to allow greater usage of this methodolgy on more sites. The current rule restricts its' use to Class III or IV soils with current or proposed drainage improvements.	This rule and methodolgy should allow usage of the water table modeling procedure for all Classes of soil types and regardles of whether drainage exists or is proposed. If the methodolgy works for the limited conditions within the former Rule if will work for all site conditions.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	This rule can already be used in all parts of the State, not just certain soil groups.
.0504	47	29	Sentence placement is odd - should it be a (number) or (letter) or refer to (h) in line 29 of page 22 or (5) in line 8?		Lee Rashkin, Presby Environmental, 10/31/2017	Agree. This paragraph has been changed to be a separate subparagraph.

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.0505	48		The depth to saprolite should be removed as an unsuitable condition. The depth to unsuitable characteristics should be to lithic bedrock or CR horizons. When you have C horizons (saprolite) then the Table III in Saprolite section (.0506) above can be applied as part of the evaluation process. Many case studies have been completed in saprolite to show that it does move water in certain conditions, therefore it should be treated as part of the useable formation. Remove Saprolite from the rule heading and have the following; 15A NCAC 18E .0505 Depth to Rock or Parent Material. Remove the word “saprolite” from this section. Now if we have to keep saprolite in this rule section then allow a new section like the following; (d) Where sites are Unsuitable with respect to soil depth, it may be classified Provisionally Suitable after a special investigation indicates that a modified or alternative system can be installed in accordance with rules. Again, looking at past research and site testing and the saprolite material itself as part of soil formation process and being useable under certain conditions.		Don Wells, S&EC, 10/23/2017	After reviewing the scientific research conducted by professors at NC State, we have determined water moves vertically in saprolite and not horizontally, fractures and veins do not transmit water at a higher rate than the saprolite material surrounding the fracture or vein, saprolite does have a CEC (cation exchange capacity) higher than that of a sand, and oxygen should be passed through the profile as water moves in and out of the soil profile. With this information we have decided to treat saprolite systems as soil systems with respect to well setback. The system shall be 100’ from any well but in no case less than 50’ due to site planning considerations. Since the 100’ setback is required in the well rules for saprolite systems, the LHD shall obtain a variance if the well will be less than 100’. As far as the reduced vertical setbacks, we understand that science showing water movement in saprolite is similar to soil and it may treat effluent like soil but no pathogenic studies have been conducted in these materials, so no reduced vertical setbacks will be granted. As always the licensed professionals may submit a .1948 (d) or new .0509(f) for saprolite systems with reduced vertical setbacks.
.0505	48		The restrictive requirement for certain textures of saprolite needs removal. If the material being proposed meets other suitable characteristics such as color, texture, consistence, etc. then it should be considered for use. Too many times I've had sites that the LHD has called a saprolite a sandy clay loam texture that can only be used with pretreatment. Sometimes the actual soil horizon may be a BC with enough soil and structure to not be classified as saprolite but the LHD falls back on the SCL saprolite rule which either prevents permitting of the site or excessive costs associated with system installation.	Allow all textures of a "C" horizon for saprolite if other characteristics are usable. If a minimum include sandy clay loam saprolite as permittable without pretreatment.	Jason Hall, Central Carolina Soil Consulting, 10/30/2017	After reviewing the scientific research conducted by professors at NC State, we have determined water moves vertically in saprolite and not horizontally, fractures and veins do not transmit water at a higher rate than the saprolite material surrounding the fracture or vein, saprolite does have a CEC (cation exchange capacity) higher than that of a sand, and oxygen should be passed through the profile as water moves in and out of the soil profile. With this information we have decided to treat saprolite systems as soil systems with respect to well setback. The system shall be 100’ from any well but in no case less than 50’ due to site planning considerations. Since the 100’ setback is required in the well rules for saprolite systems, the LHD shall obtain a variance if the well will be less than 100’. As far as the reduced vertical setbacks, we understand that science showing water movement in saprolite is similar to soil and it may treat effluent like soil but no pathogenic studies have been conducted in these materials, so no reduced vertical setbacks will be granted. As always the licensed professionals may submit a .1948 (d) or new .0509(f) for saprolite systems with reduced vertical setbacks.
.0505			Statements regarding suitability determination are inconsistent, sometimes included, sometimes not, sometimes a maximum, sometimes a minimum, sometimes with effluent strength indicated. Suggest that a consistent format be used in all of these sections, or that one statement regarding suitablity based on these criteria be made in .0509. It may be that .0509 (b) would be adequate.		Connie Adams, Caldwell LHD, 10/31/2017	Agree and have added language to rules to clarify what is suitable, unsuitable, and how advanced pretreatment siting criteria ties in.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0505	48	19	Title should be modified.	Title should be: "Soil Depth to Rock, or Unsuitable Saprolite and Parent Material". Title needs to reflect the depth to an unsuitable site condition. Some sites have usable saprolite or parent materials such as a loose sandy C soil horizon. Reading of the title and rule sets up a contradiction with other rules and systems that do allow less vertical separation, or for deep and sand-lined systems.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. We kept soil depth the same. We have changed the rule based on the limiting condition, not the soil depth.
.0505	48	20	I opposed the rule allowance for 18 inches of soil depth. NCAC 18A .1956(1) requires "at least 24 inches of naturally occurring soil are present above saprolite, rock, or soil wetness conditions" for conventional systems. The Department has required Infiltrator Water Technologies to undertake a 7-year-long (CDWS-2010-1, issued May 24, 2010 and presently active via CDWS 2010-I-R2B), extremely expensive field performance study of chambers in order to support an approval for the use of 8-inch-high chambers in 20 inches of soil. Infiltrator is not aware of any scientific studies conducted by the State of North Carolina to support the allowance of an 18-inch soil depth, such as in-ground installations of conventional systems with wet and dry season hydraulic performance monitoring and measurement of household water use. Without such support, an arbitrary change in regulation is unwarranted. Making such a change represents a double standard being applied between regulator and regulants, which is unacceptable. Its commensurate with the Department issuing a non-proprietary innovative approval for an aerobic, TS-II advanced wastewater pretreatment system (bubbler with a specified air flow installed in a tank of a certain volume and size), with no supporting scientific studies on the performance of the system and its ability to adequately meet TS-II wastewater quality standards.		Dave Lentz, Infiltrator Water Technologies, 10/31/2017	The topic of "how much soil" vs "how much separation" is not a new one for the Branch. The historical context is as follows: 15A NCAC .1956(1) cites a minimum 24" natural soil required for installation of "Shallow systems". Rule .1955(m) states that a minimum of 12" of natural soil beneath the infiltrative surface. This potentially allows use of sites with only 20" of natural soil provided that appropriate trench products or configurations are used. These include "shorter" media in the form of 8" and 10" large diameter pipe (LDP) (added to rule .1956 in 1988) and low-pressure pipe (LPP) configurations specifying 8" of gravel (added in 1990). Approval and use of these system types precedes ISI products by a decade or more. When the company applied for its first approval in 2010, it was the first time "open architecture" products were proposed for use in this configuration on sites with as little as 20" of natural soil. The Branch thus contends that its requirement for hydraulic investigations was justified. We do acknowledge that the approval process has taken far too long but that is the case for all applications, not just this one. We are aware of the cumbersome nature of PIA processes and are working to fix that by revising our antiquated rules and (by default) our policies and procedures.
.0505	48	20	The subject of Infiltrator's above-referenced study, the Quick4 Plus Standard LP chamber, provides 2.44 sf/lf of unobstructed open bottom area when installed in a 36-inch-wide trench, and is rated at 100% of the sizing of a conventional gravel trench at 3 sf/lf. Conventional trenches are different technologies compared to a chamber, meaning that conclusions drawn from CDWS-2010-1 and subsequent 20-inch-soil approvals are not relevant or transferrable in any way to conventional systems. Conventional systems do not provide an unobstructed open bottom area like chambers and have reduced hydraulic capabilities as a result. Assuming a porosity of 35%, the unobstructed open bottom area is 1.05 sf/lf for a 3-ft-wide conventional trench, which is 57% less than the unobstructed open bottom area provided by the Quick4 Plus Standard LP chamber, resulting in significantly reduce hydraulic capacity. While the sizing is the same between conventional systems and the chamber, the infiltrative capacity is vastly different. Applying the Rule. 1969 criteria of structural integrity, chemical durability, hydraulic performance and wastewater treatment, there is no defensible way to compare the Infiltrator chamber study for use with conventional systems and 18 inches of soil depth.	Restore all requirements from current-day NCAC 18A .1900 requiring a minimum total thickness of naturally occurring soil above saprolite, rock, or soil wetness conditions, or demonstrate to industry stakeholders that the Department has undertaken a scientific study of the same breadth and scope as has been required under CDWS-2010-1 and its successor approvals to generate defensible evidence supporting the proposed minimum 18-inch soil depth profile.	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	The topic of "how much soil" vs "how much separation" is not a new one for the Branch. The historical context is as follows: 15A NCAC .1956(1) cites a minimum 24" natural soil required for installation of "Shallow systems". Rule .1955(m) states that a minimum of 12" of natural soil beneath the infiltrative surface. This potentially allows use of sites with only 20" of natural soil provided that appropriate trench products or configurations are used. These include "shorter" media in the form of 8" and 10" large diameter pipe (LDP) (added to rule .1956 in 1988) and low-pressure pipe (LPP) configurations specifying 8" of gravel (added in 1990). Approval and use of these system types precedes ISI products by a decade or more. When the company applied for its first approval in 2010, it was the first time "open architecture" products were proposed for use in this configuration on sites with as little as 20" of natural soil. The Branch thus contends that its requirement for hydraulic investigations was justified. We do acknowledge that the approval process has taken far too long but that is the case for all applications, not just this one. We are aware of the cumbersome nature of PIA processes and are working to fix that by revising our antiquated rules and (by default) our policies and procedures.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0505	48	20	Since 2010, the Department has repeatedly demanded from Infiltrator the production of scientific justification for the placement of 8-inch-high chambers in 20 inches of naturally occurring soil in order for this configuration to be approved as innovative. The initial and current controlled demonstration/provisional approvals describing the required information are provided in Attachment 1. On more than one occasion, Infiltrator Water Technologies has petitioned the Department to end the above-referenced field studies and move to innovative status and been denied, with the Department requiring the production of additional scientific justification. For example: - November 27, 2013 OSWP Comments and Concerns, Infiltrator's Application for Innovative System Approval Modification, IWWS-2010-1: Quick4 Plus Standard LP Chamber - Reviewers express doubts and technical concerns regarding the installation of an 8-inch-high chamber in 20 inches of soil (Attachment 2).		Dave Lentz, Infiltrator Water Technologies, 10/31/2017	The topic of "how much soil" vs "how much separation" is not a new one for the Branch. The historical context is as follows: 15A NCAC .1956(1) cites a minimum 24" natural soil required for installation of "Shallow systems". Rule .1955(m) states that a minimum of 12" of natural soil beneath the infiltrative surface. This potentially allows use of sites with only 20" of natural soil provided that appropriate trench products or configurations are used. These include "shorter" media in the form of 8" and 10" large diameter pipe (LDP) (added to rule .1956 in 1988) and low-pressure pipe (LPP) configurations specifying 8" of gravel (added in 1990). Approval and use of these system types precedes ISI products by a decade or more. When the company applied for its first approval in 2010, it was the first time "open architecture" products were proposed for use in this configuration on sites with as little as 20" of natural soil. The Branch thus contends that its requirement for hydraulic investigations was justified. We do acknowledge that the approval process has taken far too long but that is the case for all applications, not just this one. We are aware of the cumbersome nature of PIA processes and are working to fix that by revising our antiquated rules and (by default) our policies and procedures.
.0505	48	20	June 3, 2014 I&E Committee meeting - A motion and second were carried for approval of the coastal plain controlled demonstration to move to innovative based on data for 55 installed systems monitored during the 2014 wet season, where the system performance met the terms of the controlled demonstration approval. The Department opted to override the favorable I&E Committee ballot (Attachment 4) and require the collection of additional dry season data, leading to the submission of a dry-season report on July 24, 2017 (I&E Committee meeting minutes and subsequent dry season report Attachments 3 and 4). Following the issuance of an innovative approval for the coastal plain on October 31, 2014, the Department issued a Piedmont-based controlled demonstration approval directing the collection of additional field data for 8-inch-high chambers installed in 20 inches of soil (Attachment 1). This study has not been completed and is therefore inconclusive, yet the Department proposes allowing an 18-inch soil depth on a statewide basis.		Dave Lentz, Infiltrator Water Technologies, 10/31/2017	The topic of "how much soil" vs "how much separation" is not a new one for the Branch. The historical context is as follows: 15A NCAC .1956(1) cites a minimum 24" natural soil required for installation of "Shallow systems". Rule .1955(m) states that a minimum of 12" of natural soil beneath the infiltrative surface. This potentially allows use of sites with only 20" of natural soil provided that appropriate trench products or configurations are used. These include "shorter" media in the form of 8" and 10" large diameter pipe (LDP) (added to rule .1956 in 1988) and low-pressure pipe (LPP) configurations specifying 8" of gravel (added in 1990). Approval and use of these system types precedes ISI products by a decade or more. When the company applied for its first approval in 2010, it was the first time "open architecture" products were proposed for use in this configuration on sites with as little as 20" of natural soil. The Branch thus contends that its requirement for hydraulic investigations was justified. We do acknowledge that the approval process has taken far too long but that is the case for all applications, not just this one. We are aware of the cumbersome nature of PIA processes and are working to fix that by revising our antiquated rules and (by default) our policies and procedures.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0505	48	20	- Present day - The Department continues to require the collection of field data from Piedmont sites to support a statewide approval of the Quick4 Plus Standard LP chamber in 20 inches of soil (Attachment 5), while proposing the installation of conventional systems in 18 inches of soil for the less-robust conventional technology in its rules with no supporting science. The Department needs to adhere to the same standards of care and scientific investigation that it holds the regulated community to adhere to.		Dave Lentz, Infiltrator Water Technologies, 10/31/2017	The topic of "how much soil" vs "how much separation" is not a new one for the Branch. The historical context is as follows: 15A NCAC .1956(1) cites a minimum 24" natural soil required for installation of "Shallow systems". Rule .1955(m) states that a minimum of 12" of natural soil beneath the infiltrative surface. This potentially allows use of sites with only 20" of natural soil provided that appropriate trench products or configurations are used. These include "shorter" media in the form of 8" and 10" large diameter pipe (LDP) (added to rule .1956 in 1988) and low-pressure pipe (LPP) configurations specifying 8" of gravel (added in 1990). Approval and use of these system types precedes ISI products by a decade or more. When the company applied for its first approval in 2010, it was the first time "open architecture" products were proposed for use in this configuration on sites with as little as 20" of natural soil. The Branch thus contends that its requirement for hydraulic investigations was justified. We do acknowledge that the approval process has taken far too long but that is the case for all applications, not just this one. We are aware of the cumbersome nature of PIA processes and are working to fix that by revising our antiquated rules and (by default) our policies and procedures.
.0505	48	20 to 23	This is an example of inconsistent suitability statement. Why is this one specified for DSE and gravity distribution? Other limiting conditions do not have this specified, even though they also might have a reduced soil depth needed based on pretreatment or pressure dispersal. It is cleaner and easier to read without this specified. If DSE is specified, statement as to suitable depth for other treatment levels should be added.	"(a)soil depths to saprolite, rock or parent material 18 inches or greater shall be considered suitable as to soil depth. (b) Soil depths to saprolite, rock or parent material less than 18 inches shall be considered unsuitable as to soil depth. "	Connie Adams, Caldwell LHD, 10/31/2017	Disagree. We are re-stating what is in the current rules in two different places. The concepts are now stated here together. The strength of the wastewater and how it is dispersed matters.
.0505	48	22	Denial of lots where APT can make it suitable allows owner to get permit for surface discharge? Comment - no position		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. The LHD evaluates the lot based on what the owner applies for. What the owner does with those results is their choice.
.0505	48	22 to 23	Depths to saprolite, rock, or parent material less than 18 inches are considered suitable or usable with alternative systems, adequate Ksat rate with adjusted LTAR, pretreatment, and/or site improvements. Main criteria is to maintain the minimum vertical spearation from the system infiltrative bottom to an unsuitable condition.	Depths to saprolite, rock, or parent material less than 18 inches are considered suitable or usable with alternative systems, adequate Ksat rate with adjusted LTAR, pretreatment, and/or fill site improvements. Main criteria is to maintain a vertical spearation from the system infiltrative bottom to an unsuitable condition. The rule as written sets up contraditions with other alternative system types and rules.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree with modifications. We have added language in Rule .0509 to address this issue based on advanced pretreatment.
.0505	48	24	Modify and re-write sentence.	The required vertical soil depth is not from the soil surface for deep, sand-lined, or alternative systems. It should be from the unsuitable rock, saprolite, parent material condition up to the bottom of whatever the proposed dispersal field may be??? Vertical separations by other rules and system types could be 36, 24, 18, 14, 12, 9, or 6 inches. This rule needs serious re-consideration and re-write in context of the rules, and to avoid confusion and direct conflict with other rules, especially current Rule .1970.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree with modifications. We have added language in Rule .0509 to address this issue based on advanced pretreatment.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0506	48		Treat saprolite the same as parent material and soil with regards to horizontal setbacks. Many coastal soil profiles consist of an A horizon over a C horizon (parent material) profile and do not follow the same setback requirements as saprolite even though both are taxonomically classified as a C horizons.		Alan Clapp, LSS, 10/24/2017	After reviewing the scientific research conducted by professors at NC State, we have determined water moves vertically in saprolite and not horizontally, fractures and veins do not transmit water at a higher rate than the saprolite material surrounding the fracture or vein, saprolite does have a CEC (cation exchange capacity) higher than that of a sand, and oxygen should be passed through the profile as water moves in and out of the soil profile. With this information we have decided to treat saprolite systems as soil systems with respect to well setback. The system shall be 100' from any well but in no case less than 50' due to site planning considerations. Since the 100' setback is required in the well rules for saprolite systems, the LHD shall obtain a variance if the well will be less than 100'. As far as the reduced vertical setbacks, we understand that science showing water movement in saprolite is similar to soil and it may treat effluent like soil but no pathogenic studies have been conducted in these materials, so no reduced vertical setbacks will be granted. As always the licensed professionals may submit a .1948 (d) or new .0509(f) for saprolite systems with reduced vertical setbacks.
.0506			Statements regarding suitability determination are inconsistent, sometimes included, sometimes not, sometimes a maximum, sometimes a minimum, sometimes with effluent strength indicated. Suggest that a consistent format be used in all of these sections, or that one statement regarding suitablity based on these criteria be made in .0509. It may be that .0509 (b) would be adequate.		Connie Adams, Caldwell LHD, 10/31/2017	Agree and have added language to rules to clarify what is suitable, unsuitable, and how advanced pretreatment siting criteria ties in.
.0506	48		The proposed rules include rules specific to saprolite. This will be helpful to designers.		Bill Fenner, Aquapoint, 10/29/2017	Thank you
.0506	48		Recommend treating saprolite (C horizon) as a component of the soil and subject to the same rules. No increased vertical separation, and remove the one-inch of suitable soil equals two inches of saprolite. Have the saprolite section reference a 12-inch minimum vertical separation to an unsuitable condition such as lithic bedrock contact or soil wetness condition. Some LHD classifies the saprolite texture with finer texture such as sandy clay loam. In my opinion, the downward movement of clay is a soil formation process, therefore keep it within the same conversation. There are a lot site conversations about "is this C or BC material" and "is this more the 50% B or 50% C", etc, and this creates a lot of confusion in the field and I feel we should look at the bigger picture, does the site treat and move water. We already allow having pretreatment in saprolite if the concern is "treatment". Then the main question is; does the saprolite material move water. I recommend expanding the current Table III to include other saprolite/soil textures.		Don Wells, S&EC, 10/23/2017	After reviewing the scientific research conducted by professors at NC State, we have determined water moves vertically in saprolite and not horizontally, fractures and veins do not transmit water at a higher rate than the saprolite material surrounding the fracture or vein, saprolite does have a CEC (cation exchange capacity) higher than that of a sand, and oxygen should be passed through the profile as water moves in and out of the soil profile. With this information we have decided to treat saprolite systems as soil systems with respect to well setback. The system shall be 100' from any well but in no case less than 50' due to site planning considerations. Since the 100' setback is required in the well rules for saprolite systems, the LHD shall obtain a variance if the well will be less than 100'. As far as the reduced vertical setbacks, we understand that science showing water movement in saprolite is similar to soil and it may treat effluent like soil but no pathogenic studies have been conducted in these materials, so no reduced vertical setbacks will be granted. As always the licensed professionals may submit a .1948 (d) or new .0509(f) for saprolite systems with reduced vertical setbacks.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0506	48	30	MORE CONSIDERATION SHOULD BE GIVEN TO SYSTEMS PLACED IN SAPROLITE AREAS. THE MAJORITY OF LICENSED SOIL SCIENTISTS IN THE FIELD FIND SAPROLITE TO BE MORE SUITABLE THAN THE CURRENT OR PROPOSED RULES ALLOW. ALSO IN AREAS OF SAPROLITE, THE SETBACKS TO WELLS IS REQUIRED AT 100 FT., WHERE SITE IDENTIFIED IN SOILS MAY BE ALLOWED TO A MINIMUM SETBACK OF 50 FT. THIS SHOULD BE EXAMINED AND EQUITY BE GIVEN IN THESE RULES	EXPAND THE RULES FOR SAPROLITE AREAS.	Doug Lassiter, NCSTA, 10/24/2017	After reviewing the scientific research conducted by professors at NC State, we have determined water moves vertically in saprolite and not horizontally, fractures and veins do not transmit water at a higher rate than the saprolite material surrounding the fracture or vein, saprolite does have a CEC (cation exchange capacity) higher than that of a sand, and oxygen should be passed through the profile as water moves in and out of the soil profile. With this information we have decided to treat saprolite systems as soil systems with respect to well setback. The system shall be 100' from any well but in no case less than 50' due to site planning considerations. Since the 100' setback is required in the well rules for saprolite systems, the LHD shall obtain a variance if the well will be less than 100'. As far as the reduced vertical setbacks, we understand that science showing water movement in saprolite is similar to soil and it may treat effluent like soil but no pathogenic studies have been conducted in these materials, so no reduced vertical setbacks will be granted. As always the licensed professionals may submit a .1948 (d) or new .0509(f) for saprolite systems with reduced vertical setbacks.
.0506	48	31 to 33	Many studies have shown that the water movement in saprolite moves through the micropores until saturated. Once saturated, I'm sure water movement would be faster but with no higher increase than in soils. Comparing water movement rates through saprolite to our more coarse textured soils we see no increased threat to compromising water quality.	I would proposed that saprolite be required to have the same vertical separation restrictions as soil, no more.	Jim Beeson, Piedmont Environmental Associates, PA, 10/2/2017	After reviewing the scientific research conducted by professors at NC State, we have determined water moves vertically in saprolite and not horizontally, fractures and veins do not transmit water at a higher rate than the saprolite material surrounding the fracture or vein, saprolite does have a CEC (cation exchange capacity) higher than that of a sand, and oxygen should be passed through the profile as water moves in and out of the soil profile. With this information we have decided to treat saprolite systems as soil systems with respect to well setback. The system shall be 100' from any well but in no case less than 50' due to site planning considerations. Since the 100' setback is required in the well rules for saprolite systems, the LHD shall obtain a variance if the well will be less than 100'. As far as the reduced vertical setbacks, we understand that science showing water movement in saprolite is similar to soil and it may treat effluent like soil but no pathogenic studies have been conducted in these materials, so no reduced vertical setbacks will be granted. As always the licensed professionals may submit a .1948 (d) or new .0509(f) for saprolite systems with reduced vertical setbacks.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0506	48	32 to 36	Why is the requirement increased from 12 inches to 24 inches below trench bottom using saprolite? My experience in the field doesn't show the need for double depth separation requirement from "Soil" material.	Reduce the required vertical separation for saprolite to 12 inches.	Jason Hall, Central Carolina Soil Consulting, 10/30/2017	After reviewing the scientific research conducted by professors at NC State, we have determined water moves vertically in saprolite and not horizontally, fractures and veins do not transmit water at a higher rate than the saprolite material surrounding the fracture or vein, saprolite does have a CEC (cation exchange capacity) higher than that of a sand, and oxygen should be passed through the profile as water moves in and out of the soil profile. With this information we have decided to treat saprolite systems as soil systems with respect to well setback. The system shall be 100' from any well but in no case less than 50' due to site planning considerations. Since the 100' setback is required in the well rules for saprolite systems, the LHD shall obtain a variance if the well will be less than 100'. As far as the reduced vertical setbacks, we understand that science showing water movement in saprolite is similar to soil and it may treat effluent like soil but no pathogenic studies have been conducted in these materials, so no reduced vertical setbacks will be granted. As always the licensed professionals may submit a .1948 (d) or new .0509(f) for saprolite systems with reduced vertical setbacks.
.0506	48	32 to 36	With the knowledge and experience gained in working with saprolite materials the 24 inch vertical separation to unsuitable conditions should be reduced to 18 inches, and with alternative pretreatment <18 inches separation. If the saprolite is questionable Ksat or further site evaluations should be allowed for usage.	With the knowledge and experience gained in working with saprolite materials the 24 inch vertical separation to unsuitable conditions should be reduced to 18 inches, and with alternative pretreatment <18 inches separation. If the saprolite is questionable Ksat or further site evaluations should be allowed for usage.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	After reviewing the scientific research conducted by professors at NC State, we have determined water moves vertically in saprolite and not horizontally, fractures and veins do not transmit water at a higher rate than the saprolite material surrounding the fracture or vein, saprolite does have a CEC (cation exchange capacity) higher than that of a sand, and oxygen should be passed through the profile as water moves in and out of the soil profile. With this information we have decided to treat saprolite systems as soil systems with respect to well setback. The system shall be 100' from any well but in no case less than 50' due to site planning considerations. Since the 100' setback is required in the well rules for saprolite systems, the LHD shall obtain a variance if the well will be less than 100'. As far as the reduced vertical setbacks, we understand that science showing water movement in saprolite is similar to soil and it may treat effluent like soil but no pathogenic studies have been conducted in these materials, so no reduced vertical setbacks will be granted. As always the licensed professionals may submit a .1948 (d) or new .0509(f) for saprolite systems with reduced vertical setbacks.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0506	49	1 to 2	With the knowledge and experience gained in working with saprolite materials finer textured soils should be allowed especially sandy clay loam. Textures with more clay content than sandy clay loam should be allowed for usage with positive Ksat testing and site evaluations results.	With the knowledge and experience gained in working with saprolite materials finer textured soils should be allowed especially sandy clay loam. Textures with more clay content than sandy clay loam should be allowed for usage with positive Ksat testing and site evaluations results.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	After reviewing the scientific research conducted by professors at NC State, we have determined water moves vertically in saprolite and not horizontally, fractures and veins do not transmit water at a higher rate than the saprolite material surrounding the fracture or vein, saprolite does have a CEC (cation exchange capacity) higher than that of a sand, and oxygen should be passed through the profile as water moves in and out of the soil profile. With this information we have decided to treat saprolite systems as soil systems with respect to well setback. The system shall be 100' from any well but in no case less than 50' due to site planning considerations. Since the 100' setback is required in the well rules for saprolite systems, the LHD shall obtain a variance if the well will be less than 100'. As far as the reduced vertical setbacks, we understand that science showing water movement in saprolite is similar to soil and it may treat effluent like soil but no pathogenic studies have been conducted in these materials, so no reduced vertical setbacks will be granted. As always the licensed professionals may submit a .1948 (d) or new .0509(f) for saprolite systems with reduced vertical setbacks.
.0508	49	1 to 2	Available space for systems under Sections .0900, .1500, or .1700. What about systems listed under Sections .1001, .1200, .1600 ??	Available space for systems under Sections .0900, .1500, or .1700. What about systems listed under Sections .1001, .1200, .1600 ??	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree in concept. However, systems listed in Sections .1200 and .1600 are approved under .1700 (and .1500 for RWTS which meet NSF-40). Systems in Rule .1001 are non-ground absorption, so available space on the property may not be required for these systems because they could be installed inside the facility.
.0506	49	1 to 2	With the confusion of textures and soil vs saprolite, why not include finer textured saprolites? Many field discussions have taken place when the LHD calls a horizon a sand clay loam saprolite. This makes the horizon unsuitable. Many times the correct taxonomic designation should have not been to call the horizon saprolite at all.	I would also recommend that all saprolite material regardless of texture be used without any pretreatment requirements. There is no evidence that pretreatment should be required on finer textured saprolites.	Jim Beeson, Piedmont Environmental Associates, PA, 10/2/2017	After reviewing the scientific research conducted by professors at NC State, we have determined water moves vertically in saprolite and not horizontally, fractures and veins do not transmit water at a higher rate than the saprolite material surrounding the fracture or vein, saprolite does have a CEC (cation exchange capacity) higher than that of a sand, and oxygen should be passed through the profile as water moves in and out of the soil profile. With this information we have decided to treat saprolite systems as soil systems with respect to well setback. The system shall be 100' from any well but in no case less than 50' due to site planning considerations. Since the 100' setback is required in the well rules for saprolite systems, the LHD shall obtain a variance if the well will be less than 100'. As far as the reduced vertical setbacks, we understand that science showing water movement in saprolite is similar to soil and it may treat effluent like soil but no pathogenic studies have been conducted in these materials, so no reduced vertical setbacks will be granted. As always the licensed professionals may submit a .1948 (d) or new .0509(f) for saprolite systems with reduced vertical setbacks.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0507			Statements regarding suitability determination are inconsistent, sometimes included, sometimes not, sometimes a maximum, sometimes a minimum, sometimes with effluent strength indicated. Suggest that a consistent format be used in all of these sections, or that one statement regarding suitablity based on these criteria be made in .0509. It may be that .0509 (b) would be adequate.		Connie Adams, Caldwell LHD, 10/31/2017	Agree and have added language to rules to clarify what is suitable, unsuitable, and how advanced pretreatment siting criteria ties in.
.0507	49	17	Recommend allowing site testing to be used on a site with "unsuitable due to restrictive horizons". Add a section as follows; (c) Where sites are Unsuitable with respect to restrictive horizons may be classified Provisionally Suitable after a special investigation indicates that a modified or alternative system can be installed in accordance with rules.		Don Wells, S&EC, 10/23/2017	Disagree. We have removed the provisionally suitable classification, as this classification caused confusion as to whether or not a site was suitable. Sites are now either suitable or unsuitable. Consultants are always welcome to propose designs under .1948(d) or new .0509(f) on a site-specific basis.
.0507	49	18 to 21	Restrictive horizon should be updated to be better defined and quantitatively determined. The current unsuitable criteria is contradictory to deep, sand-lined, and many alternative systems.	Restrictive horizon should not have a thickness requirement, but a continuity requirement. A 1 inch restrictive horizon is as likely unsuitable as one >3 inches thick. Depth to restrictive horizon should only be a soil depth concern relative to system type which is addressed by other rules. Qualitative criteria should be a laminar horizon that contiguously occupies >50% of the available area and is identified by extreme resistence to auger boring, extremely hard / rigid / strongly cemented consistence, and obvious massive structure. A quantitative criteria could be <0.02 gal/day/sqft = 0.0013 in/hr which aligns with NCDEQ 02T rules for impermeable liners. Most restrictive horizons can be designed around through site improvements and/or system design types.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Diagree. The previous research never addressed the permeability of these horizons. To our knowledge, no further research has been done to address the permeability of these horizons. What we have is currently working and has not caused any interpretation problems. Consultants are always welcome to propose designs under .1948(d) or new .0509(f) on a site-specific basis.
.0508	49		Repair area still seems to address only dispersal area. Plans (CA) for repair system not required, but suitability of repair area required at the time. Sometimes larger tanks to account for repair dosing needs is installed up front?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree with modifications. Do not agree with installing larger tanks up front. Rule has been re-organized and language adjusted based on other comments also received.
.0508	49	28	and repair area (if required) not repair area		Glenn Hines, 10/29/2017	Disagree. We have moved the repair area exemption up in the Rule, but we don't think the "if required" needs to be located here.
.0508	49	28 to 30	What happens in the future if an innovative or accepted approval is revoked? Should only be gravel.		Steve Barry, AQWA, 10/2/2017	Disagree. The current rules allow modified or alternative systems to be used in the repair area. OSWP Staff interpretation had been that this also included systems approved under Rule .1969. S.L. 2015-147 (H705) modified Rule .1945 to mirror the OSWP interpretation. Homeowners must take responsibility for doing their due diligence when buying a house, which includes identifying that the repair system identified is more expensive.
.0508	49	30	typo	". . .provided shall meet all. . ."	Connie Adams, Caldwell LHD, 10/31/2017	Agree
.0508	49	30	"shall meet all required setbacks..."	"shall be equal to, or larger than, the initial wastewater system and meet all required setbacks..." We are putting the citizens of North Carolina at a risk by allowing for an advanced system or reduced footprint system for a repair when a primary may be a conventional system. Imagine you are a low income family with a home on a marginal piece of land. Your primary conventional system costs $4,000. Your repair however, includes drive over tanks, a TSII treatment system and drip irrigation...adding up to $30,000. When you bought the home, you didn't even know that time bomb was waiting for you. If this language was in place, the builder would have had to install a treatment system to start with so that you would know the price, alternately he could have added more land to the lot and thereby reducing density but saving some cost by having a conventional primary and a conventional repair.	Joe Soulia, Orenco Systems, 10/31/2017	Disagree. The current rules allow modified or alternative systems to be used in the repair area. OSWP Staff interpretation had been that this also included systems approved under Rule .1969. S.L. 2015-147 (H705) modified Rule .1945 to mirror the OSWP interpretation. Homeowners must take responsibility for doing their due diligence when buying a house, which includes identifying that the repair system identified is more expensive.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0508	49	30	"shall meet all required setbacks..."	"shall be equal to, or larger than, the initial wastewater system and meet all required setbacks..." We are putting the citizens of North Carolina at a risk by allowing for an advanced system or reduced footprint system for a repair when a primary may be a conventional system. Imagine you are a low income family with a home on a marginal piece of land. Your primary conventional system costs $4,000. Your repair however, includes drive over tanks, a TSII treatment system and drip irrigation...adding up to $30,000. When you bought the home, you didn't even know that time bomb was waiting for you. If this language was in place, the builder would have had to install a treatment system to start with so that you would know the price, alternately he could have added more land to the lot and thereby reducing density but saving some cost by having a conventional primary and a conventional repair.	Steve Barry, AQWA, 10/31/2017	Disagree. The current rules allow modified or alternative systems to be used in the repair area. OSWP Staff interpretation had been that this also included systems approved under Rule .1969. S.L. 2015-147 (H705) modified Rule .1945 to mirror the OSWP interpretation. Homeowners must take responsibility for doing their due diligence when buying a house, which includes identifying that the repair system identified is more expensive.
.0508	49	32	repair area (if required) not repair area		Glenn Hines, 10/29/2017	Disagree. We have moved the repair area exemption up in the Rule, but we don't think the "if required" needs to be located here.
.0508	49	32	"The ~~dispersal field~~ repair area ..."		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree with modifications based on other comments.
.0508	49	34	(c) state when the dispersal field shall be staked Prior to the issuance of the IP, the proposed dispersal field shall be field located and staked on contour when the authorized agent has concerns that the initial and repair dispersal field systems can not be installed in the area delineated.		Joe Lynn, 10/31/2017	Agree with modifications. We have added the term "as applicable" so that on a site where the dispersal field needs to be field staked it is, and it is not required for every site.
.0508	49	35	add in "wastewater systems" after "repair" so that it both mirrors (a) in line 17 and makes it clear that "initial and repair systems can be installed"	incomplete/unclear sentence - need to revise so its consistent and precise. ADD: the word "system" after "repair".	Lee Rashkin, Presby Environmental, 10/31/2017	Agree
.0508	50	3 to 17	The numbering for .0508 (e) - (g) should be subordiante to (d).	The numbering for .0508 (e) - (g) should be subordiante to (d).	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree with modifications. The rule was re-organized to try and address the comments.
.0508	50	3 to 17	Change to repair required		Glenn Hines, 10/29/2017	Agree and have re-organized paragraph based on this and other comments.
.0508	50	8	design daily flow is no more than 480 gallons for a single family dwelling unit or a single	Simplify the rules by deciding on a single GPD and linear footage limit requirement for all systems-not something different for each system category. CH/RE: Change language or replace.	Lee Rashkin, Presby Environmental, 10/31/2017	Agree in concept, but disagree for this part of the rule. This grandfather clause was incorporated into a major rule revision in 1982 that included the requirement for 100% repair area. The grandfather clause was seen as necessary to protect individuals who had in good faith purchased property relying on existing rules that did not require repair area. The limit of 480 gpd was based upon this being the design daily flow for a typical four bedroom single family home. This is also very similar to another exemption that the Legislature included in House Bill 838 in 1981.
.0508	50	13 to 14	The repair area exemption is for the property, not the system. The (f) provision appears to conflict with the property exemption granted for repair area under (d).	Delete .0508 (f), and abide under the conditions and exemption for properties as stated under (d), (e), & (g) .	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree with comment, but disagree with suggestion. Rule has been re-organized and language clarified to address this issue.
.0509	50	28	States that the minimum vertical separation distance shall be 18 inches from any limiting condition. The definition of limiting condition includes soil wetness. Does this include soil wetness?		Amy Gutherie, Carteret LHD, 9/20/2017	No, the intention was not to make all vertical separation 18 inches. The separation to soil wetness is still 12 inches. The paragraph has been revised to reflect this.
.0509	50	28	Is it the intention to make vertical separation 18" now? Per definitions "vertical separation" is between infiltrative surface (trench bottom) and unsuitable horizon. I think this is a typo and that likely intention was depth from soil surface to limiting condition. Note that this contradicts .0504 which sets limit for SWC at 12".	"(b) The minium depth from soil surface to any limiting conditions shall be 18 inches"	Connie Adams, Caldwell LHD, 10/31/2017	No, the intention was not to make all vertical separation 18 inches. The separation to soil wetness is still 12 inches. The paragraph has been revised to reflect this.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0509	50	28	18 inch vertical separation is not consistent or corrent relative to other rules for site suitability. Lesser vertical separations are possible with alternative system types and design, and as to other factors such as water table…….	Delete (b) or expand it to make it correct and in context with all other rules.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree. Deleted Paragraph (b).
.0509	50	28	"The minimum ~~vertical separation distance to any~~ suitable soil dpeth or vertical separation without APT"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree with concept, but have deleted Paragraph (b) for simplification.
.0509	50	28	"shall be 18 inches"	"shall be 24 inches" Why are we reducing this when it has provided good protection all these years? On what evidence or scientific justification are the department lowering this separation?	Joe Soulia, Orenco Systems, 10/31/2017	Disagree. However, this Paragraph has been removed.
.0509	50	28	limiting condition, (add) except for wetness, Only a 12 inch wetness is required except in Group I soil.		Len Gilstrap, Carteret LHD, 10/31/2017	Agree. Deleted Paragraph (b).
.0509	50	28	"shall be 18 inches"	"shall be 24 inches" Why are we reducing this when it has provided good protection all these years? On what evidence or scientific justification are the department lowering this separation?	Steve Barry, AQWA, 10/31/2017	Disagree. However, this Paragraph has been removed.
.0509	50	35 to 36	Need to include the "Engineered Option Permit" Rule .0207 as to options for a site classified as unsuitable.	Need to include the "Engineered Option Permit" Rule .0207 as to options for a site classified as unsuitable.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. This is listing systems that may be utilized to overcome a limiting condition. The owner always has the option to choose EOP.
.0509	51	2 to 4	Simplification possible?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	We have tried to simplify this statement as much as possible.
.0510	51		All sites at some threshold, let's say <24" total soil depth should require a detailed site characterization by a LSS. Proper evaluation of these receiver sites is very critical. Missed soil calls that appear to meet the general regulation pass / fail criteria typically have immediate ramifications. One-inch decisions with significant economic ramifications should not be the responsibility of the local Environmental Health Specialist.		Tom Ashton, American Manufacturing Company, 10/31/2017	Agree that this is a good thing, but it is not fiscally possible.
.0510	51 to 53		This entire Rule section for Special Site Evaluations needs to be incorporated into Rules .0303, .0304, .0305 Licensed or Certified Professionals etc for proper sequencing, logical order, consolidation, and to reduce repetitiveness of rules.	This entire Rule section for Special Site Evaluations needs to be incorporated into Rules .0303, .0304, .0305 Licensed or Certified Professionals etc for proper sequencing, logical order, consolidation, and to reduce repetitiveness of rules.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. This is about site evaluation and not responsibilities and belongs in Section .0500. The responsibility to prepare the special site evaluation is included in Section .0300,but the details should be included in Section .0500.
.0510	51		Regarding special site evaluations, assignment of pass / fail threshold's, particularly percentages, should not be in rule and are best addressed in policy.		Tom Ashton, American Manufacturing Company, 10/31/2017	Agree
.0510	51	17 to 18	Simplification possible?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree. We have tried to simplify the language as much as possible.
.0510	51	30 to 31	Special site evaluation not need for lateral flow and the installation of interceptor drains		Joe Lynn, 10/31/2017	We have clarified this langauge. An interceptor drain is artificial drainage, but it is not a groundwater lowering system.
.0510	51	32	dd "except in a Group I soil with a wetness greater than 36 inches"		Len Gilstrap, Carteret LHD, 10/31/2017	Agree
.0510	52	6	I assume "greater than or equal to" is a typo and should be "less than"		Connie Adams, Caldwell LHD, 10/31/2017	Agree
.0510	52	14	Not needed		Joe Lynn, 10/31/2017	Agree with concept. Have tried to clarify this language as much as possible.
.0510	52 to 53	4-37, and 1-6	A near as I can tell these requirements are repeated fully on pages 84 (Lines 5 – 21) and 85 (1-6) regarding DES DRIP DISPERSAL SYSTEMS and on page 105 (lines 2 – 28) regarding ADVANCED PRETREATMENT DRIP DISPERSAL SYSTEMS.		Tom Ashton, American Manufacturing Company, 10/31/2017	Agree and the duplicate language has been removed.
.0510	53	6	The "or" at the end infers that this requirement is specific to drip dispersal systems.		Tom Ashton, American Manufacturing Company, 10/31/2017	Agree with the comment, but that is not what was intended and has been corrected
.0510	53	17	The new rules require lateral flow or mounding analysis once the wastewater systems goes over 3,000 gpd.	There are situations where this is not necessary and I ask that this be changed.	Caroline Edwards, Earthwise Designs, 10/31/2017	Agree and we have modified the rules.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0510	53	17 to 27	Is it the state's intention that projects with an overall design daily flow greater than 3000 gpd but whose drainfields are small and dispersed over a large area be subject to these requirements? Groundwater mounding and lateral flow are very expensive for the applicant and time consuming. As is nutrient migration analysis. On sites where the actual drainfields are small and spread out, and not vertically stacked on one hillside, there is no more need to worry about a mounding analysis than in a housing development with 1/2 or 1 acre lots. This would be an unnecessary burden on certain kinds of development, especially camps and parks. In addition, this requirement appears to contradict the intention of 18E .0302 (d).	"(d) For individual ground absorption systems serving individual design units with design daily flow greater than 3000 gpd, the special site evaluation shall include sufficient site-specific data to predict . . ." OR "(d) For sites serving systems that are greater than 3000 gpd and that do not meet the exception to state review under 18E .0302 (d), the special site evaluation shall include sufficient site-specific data to predict . . "	Connie Adams, Caldwell LHD, 10/31/2017	Agree and we have modified the rules.
.0510	53	21	KSAT - it is customary to spell out an abbreviation the first time it is used in regulations	Spell out abbreviations the first time they are used. Makes reading difficult otherwise. ADD/CH: Example: "saturated hydraulic conductivity (KSAT)" when first used in regulations.	Lee Rashkin, Presby Environmental, 10/31/2017	Agree. However, OSWP has chosen to create an Abbreviations rule which encompasses all of these.
.0510	53	21 to 22	and other information determined to be necessary by the LHD or the State/Be specific/rule is open to a different interpretation from each person reading it	remove arbitrary language that is left open to interpretation of the reader. CH/RE: Change language or replace.	Lee Rashkin, Presby Environmental, 10/31/2017	Agree and have added language to clarify examples of what additional information could be requested.
.0601	54	1	SETBACKS FOUND IN TABLE SHOULD BE FURTHER MODIFIED TO ADJUST TO CLOSED PIPES (SCH. 40 OR GREATER) USED FOR TRANSMITTING WASTEWATER. WITH THE COST OF PROPERTY AND SMALLER LOTS, THE STATE SHOULD REVIEW THESE SETBACKS FOR ACTUAL RISK-BASED FEATURES.	MODIFY THE SETBACKS FOR CLOSED PIPE VERSUS DISCHARGE AREAS.	Doug Lassiter, NCSTA, 10/24/2017	Agree. Table XI in the proposed rules allows for closer setbacks for collection sewers to specific site features.
.0601	54	1	While most of these site features are to be expected at the site prior to the IP or CA being designed and sited on the property, why is the wastewater system to respect the location of things like the well lcoation or the location of a geothermal system? Most logic would indicate that the site should be placing the location of the wastewater system as the priority and then the well and geothermal system meet a setback to the wastewater system.	Re-examine the site features in Table XI and make sure the proper order of locating water/wastewater features is met. Since the owner is not to infringe on the repair area, this would extend to the repair area as well.	Doug Lassiter, NCSTA, 9/20/2017	Diasgree. All setbacks are equally important. We have absolutely no power over the order in which setbacks are addressed with the possible exception of geothermal, which can be in the building footprint. All we can do is ensure that the onsite wastewater system is located the correct distance from all identified features. In the perfect world, all site planning would be done prior to any permits being applied for, so that the owner could work out all these details in advance of applying for a permit.
.0601	54		.0601 setbacks: wastewater systems employing advanced treatment (reuse quality as defined through NCAC .02U or SB 163 v 6) should be allowed a variance to these setback requirements.		Bob Rubin, NCSU, 10/26/2017	Agree. Section .1200 allows for reduced horizontal setbacks based on the level of advanced pretreatment. Reuse has been added.
.0601	54		Table IX – "Building or other foundation without artificial drainage, including patio, deck, porch, stoop, lighting fixtures, or signage supporting columns or post." - I argue that patios, especially paving brick patios do not constitute a structural risk when in close proximity to the tank and therefore do not meet the intent of the rule requiring a setback, as long as accessibility as required by statute is maintained. Also, the word streams in the item requiring the 50' setback needs to be clarified to be perennial or intermittent streams in order to remove ephemeral streams which is included in the definition of streams and has a setback listed of 15' later in the table.		Chad Gambill, Caldwell County Health Dept, 10/31/2017	Disgree and agree. We understand the comment regarding patios, but it starts to get very difficult to regulate different types of decks/patios that owners will have on their property and how that relates to the wastewater system. We agree with the adding of perennial and intermittent.
.0601	54		"stream" should specify "intermittent and perennial".	"Any other coastal water, canal, marsh, <u>intermittent or perennial</u> stream, or other surface waters"	Connie Adams, Caldwell LHD, 10/31/2017	Agree.
.0601	54		Several of required buffer setbacks have been changed or eliminated. Need explanations and validations for all changes. This entire section will take more time to digest and justify several of these buffer setbacks, and the exemption language.	Several of required buffer setbacks have been changed or eliminated. Need explanations and validations for all changes. This entire section will take more time to digest and justify several of these buffer setbacks, and the execmption language.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Without knowing which specific setbacks the comment refers to we cannot respond to this comment.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0601	54		Setbacks from house with septic system a moving target, specifically drainage. I propose a hard number, 15 feet, okay.		Cory Brantley, 10/2/2017	Agree
.0601	54		Setback for surface water diversion - a surface water diversion that has less than 24 inches cut should have zero setback. Surface diversions are used to divert water away from homes, additional setbacks, will limit useable lot space, which could make some lots unbuildable.		Cory Brantley, 10/2/2017	Disagree. There is no way to control that the surface water diversion will not have standing water in it. And this water should not be standing on top of the wastewater system.
.0601	54		Setback from storm water conveyance. Currently states 15 feet from pipe (closed channel) or open channel. The setback from pipe (closed channel) should be different than open channel. This could be misinterpreted as gutter drain piping. Often septic systems run from 10 feet on one property sideline to 10 feet on the other property sideline. In its current state, it may be difficult to properly drain rainwater away from a home. Closed channel (solid pipe) should be allowed to cross closed channel pipe septic lines, or at a minimum have setback reduced to 5 ft.		Cory Brantley, 10/2/2017	Disagree. The piping is still moving partially treated sewage from one location to another. Reducing the setbacks provides further potential for effluent to discharge to the ground or short-circuit and move to another pathway that discharges to the ground. Additionally, storm water pipes are generally not designed, installed, or constructed to be watertight.
.0601	54		THERE IS LISTED IN THIS TABLE, A MINIMUM SETBACK FOR GEOTHERMAL CLOSED LOOP SYSTEMS. WHILE THE OTHER SETBACK MAY BE A NATURAL OCCURANCE FOR SITE LOCATION, THE LOCATION OF THE ONSITE SYSTEM AND REPAIR AREA SHOULD BE GIVEN PREFERENCE INSTEAD OF A GEOTHERMAL CLOSED LOOP SYSTEM.	PLACE SETBACKS OF AN ONSITE WASTEWATER SYSTEM IN THE APPLICATION AND CONSTRUCTION OF A GEOTHERMAL SYSTEM. CLOSED LOOP GEOTHERMAL SYSTEMS SHOULD BE MARKED FOR LOCATION.	Doug Lassiter, NCSTA, 10/24/2017	Diasgree. All setbacks are equally important. We have absolutely no power over the order in which setbacks are addressed with the possible exception of geothermal, which can be in the building footprint. All we can do is ensure that the onsite wastewater system is located the correct distance from all identified features. In the perfect world, all site planning would be done prior to any permits being applied for, so that the owner could work out all these details in advance of applying for a permit.
.0601	54		any public water line elimate any water line and irrigation line		Glenn Hines, 10/29/2017	Disagree. All water lines have the potential for contamination, so the setback should not just be from public water lines.
.0601	54		Wastewater systems definition from G.S.? Wastewater systems = all components or tankage and fields? Supply lines, pressure manifolds, etc?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Wastewater system is defined in G.S. 130A-334(15) and includes all components of the system, collection sewers, tanks, drainfields, etc.
.0601	54		Stormwater detention pond should be stormwater retention pond		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Both stormwater retention and detention ponds are now listed.
.0601	54		Building foundation ~~with artificial~~ drainage		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Understand concept, but disagree. We cannot require a horizontal setback from gutter drains or other drainage items around the house. It would be impossible to regulate and would reduce the amount of available land. This could make some sites unsuitable.
.0601	54		Top of vertical cuts of embankments of 2 feet or more (switched language around)		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. The wording is the same as in the current rules.
.0601	54		For cuts and embankments, top of slope or down slope? Confusing with artificial drainage definition?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Top of cut, not where the cut starts
.0601	54		Subsurface groundwater lowering system, ditch, … add "other than building drains"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Diagree. Current languge is fine. See response above regarding "other than building drains".
.0601	54		Surface water diversion , as measured on the ground surface, …. Add "other than building drains"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Diagree. Current languge is fine. See response above regarding "other than building drains".

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0601	54		Building foundation with drainage on the down slope side does not need a 15' setback. I think the 15' setback with foundation drains was set as a stand along number to make things simple.	Reduce the down slope requirement to 10 feet, not 15 feet.	Jason Hall, Central Carolina Soil Consulting, 10/30/2017	Disagree. One main reason we went to one number (instead of two or three) is to simplify the siting. We had comments previously that with the three different setbacks, it was difficult to determine the final grading and what the required setback would be, so LHDs would default to the largest setback. To resolve this issue, we settled on one number for all.
.0601	54		Surface water diversion is 15' in the proposed rules. This setback is too restrictive. I have proposed many swales along property lines with drain fields 10' off the property line and a 5' setback between the surface swale and drain field.	Reduce the required setback from a surface swale to a drain field to 5 feet.	Jason Hall, Central Carolina Soil Consulting, 10/30/2017	Agree
.0601	54		This rule treats all components of the wastewater system as though they were the trenches. I feel that some parts of the system, such as supply lines, should be allowed to be installed much closer than 50 feet to a well. For example, in a subdivision with community water, the water supply line is often just outside the utility easement and located within its own dedicated easement. These proposed rules would allow the septic system trenches to be installed within ten feet of the water line which is PVC pipe. Common sense would suggest that if the effluent is being transmitted through PVC pipe and the well is grouted, this would be a safer situation than what the rules would allow with the community water line and trench illustration.		Jim Beeson, Piedmont Environmental Associates, PA, 10/2/2017	Agree in part. The proposed rules allow collection sewers to have a closer setback to wells than other parts of the wastewater system. See Paragraph (i). Additionally, the definition of ground absorption system in G.S. 130A-334(1h) was modified to include tanks and treatment units, requiring us to treat them all as the same.
.0601	54		I would suggest that PVC pressurized components be allowed to be placed within 25 feet of a private well.		Jim Beeson, Piedmont Environmental Associates, PA, 10/2/2017	Agree. In the proposed draft, the setback can be reduced to 25 feet with the use of DIP or other approved pipe materials.
.0601	54		Table IX - I do not see a specific reference to "wetlands" in this draft. Understand that in the State of NC, a "marsh" is coastal in nature. The word "wetland" not synonymous with "marsh" as in this State the NCDEQ Division of Coastal Management has jursidiction over "marshes". I do not support a setback to freshwater wetlands and in seeing no specific reference to "wetlands" in the setback table, it is my understanding that there is no setback.		Joe Anlauf, Anlauf Engineering, PLLC, 10/17/2017	Agree. There is no setback to jurisdictional wetlands in North Carolina. The wastewater system can be installed right up to the edge of the wetland.
.0601	54		Table IX, setback to water lines. This setback should include provisions for sleeving the pipe or making the pipes ferrous material when the setbacks cannot be met, see PWSS rules for the same included on pages 57 and 58.		Joe Anlauf, Anlauf Engineering, PLLC, 10/17/2017	Agree and this is now included as an option in Paragraph (j).
.0601	54		Building foundation with artifical drainage use current rule 25 feet upslope, 15 feet sideslope and 5 feet downslope		Joe Lynn, 10/31/2017	Disagree. We are proposing 15 feet for everything, to ease the issues with permitting and trying to determine the location of the drainage prior to grading of the site.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0601	54		Table IX - Setbacks to geothermal wells.	Delete “open or” from “Geothermal wells – open or closed loop vertical bore”. Open loop wells used in conjunction with a heating and cooling system must comply with construction standards at least as stringent as a water supply well. This would require a separation distance of 100 feet. An open loop heating and cooling system that discharges to the surface would require more water than one that returns the water to a subsurface aquifer. Change “Geothermal wells – open or closed loop vertical bore” to “Geothermal aqueous closed loop wells”. Separation distance of 50 feet complies 15A NCAC 02C .0222 (e) (5) (B). Add to Site Features “Geothermal Direct Expansion Closed Loop wells”. As these boreholes are often drilled diagonally outward from a central location at the surface, separation distance should be established as “50 feet from entire length of the borehole” to comply with 15A NCAC 02C .0223 (e) (6) (B). Change “Geothermal wells – horizontal closed loop system” to "Horizontal Closed-Loop Geothermal System" as it is not included in definition of “well”. Change separation distance to 15 feet as these systems are installed in trenches six to seven feet deep. This is a vertical cut of more than two feet.	John Nykamp, Guildford County Health Dept, 10/16/2017	Agree
.0601	54		Table IX - Setbacks to geothermal wells.	There are many types of “injection wells”, including “Geothermal wells”. Delete “injection well” unless it is specifically defined. What is the separation distance from “Abandoned Wells”?	John Nykamp, Guildford County Health Dept, 10/16/2017	Agree
.0601	55	2	15A NCAC 18E .0601 (b) (1) would require a separation distance of 100’ from a well even when the design flow of the septic system is 100 gpd, much less than the 50’ required separation for a 600 gpd single family dwelling. Current separation distance is 50’ for a private water supply. The proposed change would make the sewage rules concur with DWR rules. However, the higher the water usage the greater the separation should be. The 50’ separation distance should be allowed for daily flows of 480 gpd or less, regardless of usage (single family dwelling or private usage). In 15A NCAC 18E .0601 (b) (2) who is to issue the variance and what is the reason for the variance?		John Nykamp, Guildford County Health Dept, 10/16/2017	Agree and added Rule citation
.0601	55	10	Replace "and used as a source of drinking water" with "or from tankage"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Diasagree but understand spirit of comment. Clarified language
.0601	55	12	Treat saprolite the same as parent material and soil with regards to horizontal setbacks. Many coastal soil profiles consist of an A horizon over a C horizon (parent material) profile and do not follow the same setback requirements as saprolite even though both are taxonomically classified as a C horizons.		Alan Clapp, LSS, 10/24/2017	Agree
.0601	55	12	Section (e) of this rule requires a separatio of 100 feet from dispersal fields using saprolite to a private drinking water source. With the lack of any scientific evidence that this would endanger the public and with all of the well/system relationships that were historically permitted with the perc test, I feel that there is no reason to require more of a setback when using saprolite than when coarser textured soils are used in the coastal plain.		Jim Beeson, Piedmont Environmental Associates, PA, 10/2/2017	Agree

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0601	55	12	Dispersal fields utilizing saprolite for treatment shall not be located closer than 100 feet to a private water supply source. Does this mean tanks can be located closer and if so how close?		Joe Lynn, 10/31/2017	Agree
.0601	55	14	I suggest consideration of the revised language for .0601(f) such as: "(f) Initial and repair dispersal field systems subject to compaction and insufficient oxygen transfer shall not be located under impervious surfaces or areas …"		Chip Hassett, The Oak Hill Company, Ltd, 10/5/2017	Agree with concept, but will keep the language we currently have.
.0601	55	14	Dispersal fields and repair areas shall not be located under impervious surfaces, areas subject to vehicular traffic, or areas subject to soil disturbance or compaction	Introduce H-10 and H-20 loading guide language. CH/RE: Change language or replace.	Lee Rashkin, Presby Environmental, 10/31/2017	Addressed with language added to the draft already. These issues (such as soil disturbance or compaction) will be evaluated based on the proposed product and its use. The H-10 and H-20 language is introduced in Section .1700.
.0601	55	19 to 21	Include "or stronger" after Schedule 40 pipe		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disgree. That option is covered in Paragraph (g)(5). Addition of language could also make things more confusing and have to define what pipe is stronger than Sch 40.
.0601	55		any other onsite drain field, change from 20' to 10'		Glenn Hines, 10/29/2017	Disagree. The 20 foot separation covers the 10 foot property line setback on two separate pieces of property, with the drainfield being installed up to the property line setback on both.
.0601	55		~~Permanent stormwater retention basin or sediment detention basin~~ stormwater detention basin, retention basin has permanent pool, drains from top, detention basin has temporary pool, drains from bottom	Setback should be reduced to 25 ft	Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0601	55		Wake County supports 25 feet from a burial plot or graveyard boundary		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. OSWP has interpreted a burial plot to be equal to a cut of two vertical feet or more with a setback of 15 feet. We are unaware of any issues with this interpretation.
.0601	55		Driveway - 3 feet from all direction		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Proposed this previously and received numerous objections to this. It would signficantly reduce the amount of space available for a wastewater system.
.0601	55		Perhaps a generic definition of Sch 40 also implies any stronger pipe of same material		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Schedule 40 is already defined in the engineering world. We do not need to re-define it in our rules.
.0601	55		Deck overhang or any other cantilever should provide enough clearance to maintain dispersal field, else 3 foot setback is required from dripline.		Ishwar Devkota, Wake County Environmental Services, 10/31/2017	Disagree. This would be very difficult to enforce.
.0601	55		Design flow for Air BnB should be addresses, perhaps like bed and breakfast homes and inns		Ishwar Devkota, Wake County Environmental Services, 10/31/2017	Disagree. The design flow is based on the facility that is already in existenance.
.0601	55		Sidewalk - 3 feet from all direction		Ishwar Devkota, Wake County Environmental Services, 10/31/2017	Disagree. Proposed this previously and received numerous objections to this. It would signficantly reduce the amount of space available for a wastewater system.
.0601	55		Better define sediment detention basin. If it's only temporary then a 50' setback is not requirement.	Temporary sediment basins should not require 50' setbacks. We cannot permit cluster subdivisions with this setbacks since sediment and erosion control departments require these devices to sometimes stay on-site until most of the site is developed and they only hold water for short durations. reduce setback to 25 feet.	Jason Hall, Central Carolina Soil Consulting, 10/30/2017	Agree
.0601	56	11	Revise definition of collection sewer (by definition includes forcemain, supply lines, any other component) conflicts		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. A collection sewer is the same as a collection system. To clear up any potential confusion, collection system has been added to the definition of collection sewer.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0601	56	11	Table XI	A sewer lateral from a building to a sewer main outfall or a septic tank would meet the definition of a "collection sewer". On May 12, 2017 the NC Division of Water Resources issued a state-wide variance allowing construction of a well for a residence or non-public water system to be constructed with a minimum separation distance of 25 feet from a sewer lateral. This variance would not apply to any other types of "collection sewers". Delete "open or" from "Geothermal wells – open or closed loop vertical bore". Open loop wells used in conjunction with a heating and cooling system must comply with construction standards at least as stringent as a water supply well. This would require a separation distance of at least 50 feet. An open loop heating and cooling system that discharges to the surface would require more water than one that returns the water to a subsurface aquifer. Change "Geothermal wells – open or closed loop vertical bore" to "Geothermal aqueous closed loop wells". Separation distance of 25 feet complies 15A NCAC 02C .0222 (e) (5) (D).	John Nykamp, Guildford County Health Dept, 10/16/2017	Agree
.0601	56	11	Table XI	Add to Site Features "Geothermal Direct Expansion closed loop wells". As these boreholes are often drilled diagonally outward from a central location at the surface, separation distance should be established as "25 feet from entire length of the borehole" to comply with 15A NCAC 02C .0223 (e) (6) (D). Change "Geothermal wells – horizontal closed loop system" to "Horizontal Closed-Loop Geothermal System" as it is not included in definition of "well". Separation distance of 5 feet complies with separation distance to any other dispersal field except designated dispersal field repair area for project site. There are many types of "injection wells", including "Geothermal wells". Delete "injection well" unless it is specifically defined. What is the separation distance from "Abandoned Wells"?	John Nykamp, Guildford County Health Dept, 10/16/2017	Agree. There is no separation distance for abandoned wells. Once a well has been abandoned it is like it never existed.
.0601	56	14	The exact meaning of public water supply source vs. private needs to be clarified. Specifically, are shared wells that serve fewer than 15 houses or 25 people (ie, do no meet criteria to be considered a Public Water Supply subject to DWR rules) considered a public or private water supply?		Connie Adams, Caldwell LHD, 10/31/2017	Agree with modifications. We have modified the language to match the term public water system which is defined in G.S. 130A-313.
.0601	56	1 to 3	There is no reason for increased setbacks for individual ground absorbtion fields or dispersal fields that meet the requirements of 18E .0302 (d)	"(h) In addition to the requirements of paragraph (a) of this Rule, wastewater systems with a proposed design daily flow greater than 3000 gpd that are subject to state review shall be located the minimum setbacks from the site features in Table X."	Connie Adams, Caldwell LHD, 10/31/2017	Agree, and that is why we added the * under Table X.
.0601	56	5 to 6	any property line 10' not 25'		Glenn Hines, 10/29/2017	Disagree. The proposed rules provide options to reduce the setbacks to a property line for systems with a design daily flow greater than 3,000 gpd.
.0601	57	5	"The minimum horizontal setback from water lines to collection sewers shall be 10 feet. Alternatively, vertical separation of 18 inches with water line on top is provided in a benched trench or in separate trenches."		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree and this language is in the proposed rules.
.0601	57		Appears a combined chart/table for IX, X, XI, illustrative diagrams for tankage would be helpful		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Wake County is always welcome to create these documents.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0601	57		Setback for top of slope or embankment should be kept at 10 feet		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. This setback is being kept at the distance in the current rules.
.0601	57		Setback for "any stormwater conveyance (pipe or open channel) …" should be 5 feet horizontal		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. The piping is still moving partially treated sewage from one location to another. Reducing the setbacks provides further potential for effluent to discharge to the ground or short-circuit and move to another pathway that discharges to the ground. Additionally, storm water pipes are generally not designed, installed, or constructed to be watertight.
.0601	58	3	Conflicts with gravity sewer/supply line/force main, collection system is defined as collection sewer		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. A collection sewer is the same as a collection system. To clear up any potential confusion, collection system has been added to the definition of collection sewer.
.0601	58	3, 14, 18	See PWS and 2T rules for reference		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	This language has been modified to match with Public Water Supply rules.
.0601	58	6	PWS Rules 15A NCAC 18C Water Supplies		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	This language has been modified to match with Public Water Supply rules.
.0601	58	14	Storm sewers - same installation requirement like water line in same trench?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. If this were to occur, a PE may always propose a design to allow for both a storm sewer and sanitary sewer in the same trench. This has not been identified as an issue that needs to be added to the proposed rules.
.0601	58	14	Make joints watertight whenever storm and sewer line cross, minimum of 6 inches cover		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. The 12 inches in the rules is also in our current rules and is less restrictive than what is required by DEQ in the 15A NCAC 02T rules for a vertical separation.
.0601	58	16, 20	Water main standard for push-on joints		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree with modifications
.0601	58	18	"under" a stream		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. This Paragraph allows both under and over crossings.
.0601	58	18 to 23	Not clear		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0601	58	21	"encased in concrete and DIP"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Collection sewer does not need to be encased in both. Language in this Paragraph mirrors the current rules. We have not heard of any problems that would require encasement in both.
.0601	58	24	Provide detail		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Wake County is always welcome to create these documents.
.0602	58		Much clearer!		Len Gilstrap, Carteret LHD, 10/31/2017	Thank you
.0602	59		3	Several of required buffer setbacks have been changed or eliminated. Need explanations and validations for all changes. This entire section will take more time to digest and justify several of these buffer setbacks, and the execmption language.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Without knowing which specific setbacks the comment refers to we cannot respond to this comment.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0700 .0800 .1100 .1400			All of these Sections address tanks, pumps, controls, materials, and their specifications or approvals. These Sections need to be organized together preferrably at the end of the rules, and revised / condensed as much as possible. Some could be put into construction references rather than into set Rules. Product approval and process rules need to be grouped together and condensed.	All of these Sections address tanks, pumps, controls, materials, and their specifications or approvals. These Sections need to be organized together preferrably at the end of the rules, and revised / condensed as much as possible. Some could be put into construction references rather than into set Rules. Product approval and process rules need to be grouped together and condensed.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Thank you for your suggestions. The organization of 18E is based upon the steps in the permitting process, including the system types (application, design flow, soils, siting, tanks, drainfields, pump systems, advanced pretreatment, O&M) followed by the specifics of various components of the wastewater system (tanks, RWTS, and PIA systems). We have tried to keep the minimum required information in the rules, as needed, and have the manufacturer supply their details as part of the approval process of the product.
.0701	60	3	At what point will DHHS have authority over collection sewers? At what point does the NC Department of Insurance Plumbing Inspector relinquish authority?		John Nykamp, Guildford County Health Dept, 10/16/2017	OSWP has authority when two or more facilities/buildings have a common collection sewer, and the utitmate system is a septic system. Language has been included to reflect this.
.0701	60	12	Provide testing outline for this paragraph		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Gravity collection sewers approved by LHD will be designed by a PE. PE can propose these tests as needed. Leaks tests for force mains and supply lines are regularly proposed by designers. Multiple tests available to choose from. Criteria to be met is specified.
.0701	60	14	Add to end of sentence "or .1700 as in off-site system"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Collection sewers for off-site systems must meet the same cover requirements as all other wastewater systems.
.0701	60	24	Should "buildings" be "design unit"?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0701	60	25	"which exceed 45 degrees or as determined by EHS when it can be easily cleaned/snaked thru the bends"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Proposed language is very subjective and would be difficult to approve/regulate.
.0702	61	12	Add "rate" at end of sentence		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. However, we have modified the language in this Rule.
.0702	61	12 to 15	5, 6, and 7 seem to contradict and may not be met simultaneously, idea is to eliminate septic conditions, EHS to design this if one pump?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree and Disagree. Numbers 5 and 6 do contradict each other, so number 6 has been deleted. Number 7 refers to a raw sewage lift station serving a single building only. Number 5 is for more than one building.
.0702	61	14	Clarification needed		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree with modifications. We have tried to clarify the current language.
.0703	61	27	The proposed rule calls for 3" gravity distribution line. Is 4" pipe not allowed for gravity distribution?		Chad Gambill, Caldwell County Health Dept, 10/31/2017	Agree with comment. Language has been modified to state a minimum of three inch pipe.
.0703	61	27	Specifies that a three inch nominal size pipe shall be used.	Amend to say "minimum of three inch nominal size Schedule 40"	Doug Lassiter, NCSTA, 10/2/2017	Agree with modifications
.0703	61	27	"The minimum strength of gravity pipe"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. That phrase is not needed. Sch 40 is a pipe material and strength description.
.0703	61	29	Move "1/8-inch per foot" to design criterion, max fall pursuant to PC		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. This design criteria is very specific to the gravity pipe from the septic tank. The design criteria in .0701 includes building laterals, etc, which would not fall under this criteria.
.0703	61	30	This rule should be struck. There are better, easier and cheaaper alternatives.		Joe Lynn, 10/31/2017	While used infrequently, this alternative was placed in the Rules per request of an installer (who happened to be a legislator), and is technically justified as an alternative.
.0703	61	27 to 28	shall be three-inch nominal size...	"shall be three-inch nominal or greater size..." Some stub outs for systems are 4"+.	Joe Soulia, Orenco Systems, 10/31/2017	Agree with comment. Language has been modified to state a minimum of three inch pipe.
.0703	61	27 to 28	shall be three-inch nominal size...	"shall be three-inch nominal or greater size..." Some stub outs for systems are 4"+.	Steve Barry, AQWA, 10/31/2017	Agree with comment. Language has been modified to state a minimum of three inch pipe.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0703	61 and 62	30, 6, and 14	Consider merging b and c and e		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agreed and changed accordingly
.0703	62	6 to 32	Pipe materials	Recommend removing the requirement for HDPE to be designed by a PE. This material is superior in almost all ways to PVC and is becoming more and more prevalent on job sites. To require it to be pressure tested and engineer designed, when solvent welded PVC is not, flies in the face of standard practice in the sewer industry. HDPE has better welds at much longer intervals than PVC...it's simply a better practice, why add cost to it by putting hurdles in the way? Recommend removing much of this language. it is far too prescriptive.	Joe Soulia, Orenco Systems, 10/31/2017	Agree that PE pipe may be a good option, but it is not widely enough used that specific design and installation requirements aren't needed, including provisions to connect with Sch 40 pipe. We have relaxed the leakage test requirement for alternate pipe materials. Also, please note that the proposed allowances for alternative materials is not included in the current rules.
.0703	62	6 to 32	Pipe materials	Recommend removing the requirement for HDPE to be designed by a PE. This material is superior in almost all ways to PVC and is becoming more and more prevalent on job sites. To require it to be pressure tested and engineer designed, when solvent welded PVC is not, flies in the face of standard practice in the sewer industry. HDPE has better welds at much longer intervals than PVC...it's simply a better practice, why add cost to it by putting hurdles in the way? Recommend removing much of this language. it is far too prescriptive.	Steve Barry, AQWA, 10/31/2017	Agree that PE pipe may be a good option, but it is not widely enough used that specific design and installation requirements aren't needed, including provisions to connect with Sch 40 pipe. We have relaxed the leakage test requirement for alternate pipe materials. Also, please note that the proposed allowances for alternative materials is not included in the current rules.
.0703	62	14	What is meant by gravity pipe materials?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Not sure how to better explain this.
.0703	62	16	Size of pipe - 4 inch and six inch can not be used due to gravel limits		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. The driving force in pipe size is based on gravity flow or pump flow. For gravity flow, larger pipe sizes such as 4-inc or 6-inch are preferred.
.0703	62	26	Insert "minimum" in front of "two times"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0703	62	32	Alternatives are allowed when designed by PE, many places?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	We do not keep track of the frequency of this, but it does happen.
.0801	63		Table XIV chart is excellent!		Len Gilstrap, Carteret LHD, 10/31/2017	Thank you
.0801	63	3	Incorporate Tank Sizing per ASTM 1227 – 13		Alan Clapp, LSS, 10/24/2017	Diasgree. There is no justification to increase septic tank size. The proposed septic tank sizing matches with the current rules and we are unaware of any problems based on this sizing.
.0801	63	8	Take out garbage disposal table		ABCD Construction, 9/14/2017	Agree
.0801	63	8	Take out garbage disposal table		Andrew Daywalt, 9/25/2017	Agree
.0801	63	8	Take out garbage disposal table		Ben Hildreth, 9/25/2017	Agree
.0801	63	8	Take out garbage disposal table		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Agree
.0801	63	8	The minimum septic tank volumes in Table XIV exceed the minimum volumes specified in PIA & RWTS system approvals. As an example, a manufacturer may recommend a primary tank volume of one Q with their treatment system while the rules require 1.17 Q + 500 gal of septic tank.	A recommended revision would be to add a paragraph as follows: .0801(a)(4) Septic tanks for PIA and RWTS systems shall be sized in accordance with the manufacturer's approval.	Bill Fenner, Aquapoint, 10/29/2017	Agree
.0801	63	8	Take out garbage disposal table		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Agree
.0801	63	8	Take out garbage disposal table		Brian Beebe, 10/23/2017	Agree
.0801	63	8	Take out garbage disposal table		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Agree
.0801	63	8	Take out garbage disposal table		Cable Septic and Backhoe Service, 10/23/2017	Agree

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.0801	63	8	Take out garbage disposal table		Charles Dodge, C&C Septic Services, 9/25/2017	Agree
.0801	63	8	Take out garbage disposal table		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Agree
.0801	63	8	Take out garbage disposal table		Charles Driggers, Driggers Septic Tank, 9/25/2017	Agree
.0801	63	8	Take out garbage disposal table		Charlie Brice, 9/25/2017	Agree
.0801	63	8	Take out garbage disposal table		Chris Hedrick, 9/25/2017	Agree
.0801	63	8	Take out garbage disposal table		Chriscoe Bacchoe Service, 10/23/2017	Agree
.0801	63	8	Take out garbage disposal table		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Agree
.0801	63	8	Take out garbage disposal table		Daniel Newsome, D&D Organic Farming, 10/24/2017	Agree
.0801	63	8	Take out garbage disposal table		Danny Dennis, 10/23/2017	Agree
.0801	63	8	Upsizing of the septic tank when a garbage disposal is used is an added homebuilding expense that is not required in South Carolina, Tennessee, or Virginia.	Remove the third column of Table XIII requiring additional volume for homes with a garbage disposal.	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Agree
.0801	63	8	Take out garbage disposal table		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Agree
.0801	63	8	Take out garbage disposal table		David Murphy, DRM, 10/24/2017	Agree
.0801	63	8	Take out garbage disposal table		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Agree
.0801	63	8	Take out garbage disposal table		Donald Martin, 10/23/2017	Agree
.0801	63	8	ON TABLE XIII, ELIMINATE THE ADDED COLUMN FOR GARBAGE DISPOSAL. AS STATED EARLIER, THE USE OF A GARBAGE DISPOSAL DOES ADD UNDIGESTED MATERIALS TO THE SEPTIC TANK, BUT THE INCREASE IN CAPACITY OF THE SEPTIC TANK CANNOT BE FACTUALLY DETERMINED. THE DIFFERENCE IS IN THE ADDED MAINTENANCE AND SERVICE, WHICH IS AN OWNER RESPONSIBILITY	ELIMINATE THE COLUMN FOR SEPTIC TANK MINIMUM CAPACITY WITH A GARBAGE DISPOSAL.	Doug Lassiter, NCSTA, 10/24/2017	Agree
.0801	63	8	This column requires a substantial increase in septic tank capacity. This is a possibility of additional food solids going into the septic tank when a garbage disposal is added to the kitchen routine, but there will be little way for the LHD to verify the information and affect the proposed change. And the added food solids in the septic tank will result in increased maintenance, expecially since there is a requirement of an effluent filter in all septic tanks.	Eliminate	Doug Lassiter, NCSTA, 9/20/2017	Agree
.0801	63	8	Take out garbage disposal table		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Agree
.0801	63	8	Take out garbage disposal table		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Agree
.0801	63	8	Take out garbage disposal table		Garland Walker, 10/23/2017	Agree
.0801	63	8	Take out garbage disposal table		Gerald Leonard, 10/23/2017	Agree
.0801	63	8	Take out garbage disposal table		Hank Hill Grading, 10/23/2017	Agree
.0801	63	8	Take out garbage disposal table		Harry Hatcher, 9/25/2017	Agree
.0801	63	8	Recommend no garbage disposal		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0801	63	8	Suggest 250/bedroom		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. We have not received any information to show that the current design of 120 gpd/bedroom is not sufficient.
.0801	63	8	Take out garbage disposal table		Jeff Link, Rowan, LHD, 9/25/2017	Agree

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0801	63	8	Take out garbage disposal table		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Agree
.0801	63	8	Take out garbage disposal table		Jerry Pearce, 9/15/2017	Agree
.0801	63	8	Take out garbage disposal table		Johnny Strickland, 10/23/2017	Agree
.0801	63	8	Take out garbage disposal table		Kearns Pumping Service, 10/23/2017	Agree
.0801	63	8	Take out garbage disposal table		Keith Blackburn, B & C Concrete, 9/20/2017	Agree
.0801	63	8	Take out garbage disposal table		Kippy Blanks, 9/28/2017	Agree
.0801	63	8	Take out garbage disposal table		Larry Beam, 9/23/2017	Agree
.0801	63	8	Take out garbage disposal table		Lawrence Henning, 9/15/2017	Agree
.0801	63	8	Take out garbage disposal table		Lester Breedlove, 10/23/2017	Agree
.0801	63	8	Take out garbage disposal table		Mark Johnson, 10/23/2017	Agree
.0801	63	8	Take out garbage disposal table		Marty Maness, 10/23/2017	Agree
.0801	63	8	Take out garbage disposal table		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Agree
.0801	63	8	Take out garbage disposal table		Michael Barger, 9/25/2017	Agree
.0801	63	8	Take out garbage disposal table		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Agree
.0801	63	8	Take out garbage disposal table		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Agree
.0801	63	8	Table XIII	The table included for septic tank sizing included a column for the required increase in septic tank size when the site includes a garbage disposal. This is an unfounded expense to the homeowner. The Department cannot verify the amount of use exhausted by the garbage disposal. We suggest eliminated the column for the increased size for garbage disposals.	NC Home Builders Assn, 10/25/2017	Agree
.0801	63	8	Take out garbage disposal table		Parrish Homes and Pools,Inc, 10/23/2017	Agree
.0801	63	8	Take out garbage disposal table		Pat Rentz, VIP Inspection Services, 9/25/2017	Agree
.0801	63	8	Take out garbage disposal table		Perry's Grading & Septic Service, 9/14/2017	Agree
.0801	63	8	Take out garbage disposal table		Randy Lackey, Love Valley Septic, 9/25/2017	Agree
.0801	63	8	Take out garbage disposal table		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Agree
.0801	63	8	Take out garbage disposal table		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Agree
.0801	63	8	Take out garbage disposal table		Ronnie Burgin, 9/25/2017	Agree
.0801	63	8	Take out garbage disposal table		Russell C. Trodgon, 9/18/2017	Agree
.0801	63	8	Take out garbage disposal table		Russell Lineberry, 10/23/2017	Agree
.0801	63	8	Take out garbage disposal table		Sterlin Church, Church's Backhoe Service, 9/25/2017	Agree
.0801	63	8	Take out garbage disposal table		Steve Cannon, Rowan LHD, 9/25/2017	Agree
.0801	63	8	Take out garbage disposal table		Terry Maples, 10/23/2017	Agree
.0801	63	8	Take out garbage disposal table		TM Grading, Inc, 10/23/2017	Agree
.0801	63	8	Take out garbage disposal table		Tyler Jolley, 9/15/2017	Agree
.0801	63	8	Take out garbage disposal table		Valentina Oxendine, 10/23/2017	Agree
.0801	63	8	Take out garbage disposal table		Vince Scroggins, 9/14/2017	Agree
.0801	63	8	Take out garbage disposal table		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Agree

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.0801	63	8	Take out garbage disposal table		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Agree
.0801	63	8	Take out garbage disposal table		Willilam Garrison, EcoClean Septic, 9/25/2017	Agree
.0801	63	13	Review if this formula suggested as 6 and 7, bedroom end of needing same tank		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. We have not received any information to show that the current method to size septic tanks for six and seven bedroom homes is inadequate.
.0801	63	14 to 15	Remove lines 14 and 15		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. We have not received any information to show that there is a problem with this current sizing requirement. However, we have re-evaluted its location and included this sentence in Subparagraph (a)(3).
.0801	63	18	If tanks in series chosen? "Each tank shall have a minimum …"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Uncertain about the question posed by the comment, but we changed the location of one sentence that may help make the Paragraph a little clearer.
.0801	63	21	THE ADDITIONAL LANGUAGE FOR SYSTEMS USING GRINDER PUMPS IS VERY ACCEPTABLE. DISCUSSIONS WITH PUMP MANUFACTURERS HAVE SPOKE FAVORABLY, AND THERE IS STILL THE OPTION FOR OTHER DESIGNS THAT DEMONSTRATE EQUAL PERFORMANCE.	LANGUAGE SOLVES A PROBLEM WITH SOLIDS THAT GO THROUGH A GRINDER PUMP, AND THE PERFORMANCE OPTION SHOWS FLEXIBILITY FOR SITE SPECIFIC APPLICATIONS	Doug Lassiter, NCSTA, 10/24/2017	Thank you
.0801	63	21	Replace "prior" with "upstream"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Current language is sufficient.
.0801	63	21	Much needed rule!		Len Gilstrap, Carteret LHD, 10/31/2017	Thank you
.0801	63	22	No one tank, put two		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0801	63	22	Review with WC perspective?? (shall be doubled)		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0801	64	4	No State review, replace septic tank with alternative methods		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. The alternative methods would need to be approved on a site specific/project specific basis. The proposed wording allows for this option. Additionally, recent legislation has required that a PE be in the review process.
.0801	64	5	Is State review required if designed by a PE?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Yes. Changed wording to reflect State review.
.0801	64	9	Page 64 line 9 states “approved effluent filter shall be in the compartment immediately prior to discharge”. This should apply to pressurized systems as well, where the pump tank is the compartment immediately prior to discharge. Simply putting a gravity filter in the septic tank is not good enough. Not only can debris enter the pump tank from the pump tank access, but the smaller debris can reform into much larger debris in the pump tank as well as biological growth can slough off the tank walls, piping and pumps. On page 132 lines 16 and 17 the proposed code even mentions solids accumulating in the pump tank and turbine pump intake holes are not much different in sizing than the discharge holes on pressurized laterals. Just as this part of the code shows the importance of filtering at the discharge so should the section on pressure distribution. There are many options, such as pressure filters, filtered pump vaults, pump screens, and more.		Gary Koteskey, Sim/Tech Filter, Inc, 10/31/2017	Disagree . We see no basis for requiring this on all systems. However, since the rules would now include the concept of mass loading, these devices could be used to reduce TSS and thus mass loading as a whole. The designer would make this determination.
.0801	64	10	Risers required in each in effluent end?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Yes, unless the top of the septic tank is within six inches of finished grade.

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.0801	64		Risers to grade is an excellent thing.		Bill Fenner, Aquapoint, 10/2/2017	Agree in concept. G.S. 130A-335.1(b)(4) only requires that the access device come to within six inches of the finished grade. We cannot require the risers to come to grade for all septic tanks.
.0802	64		It is an improvement to include flow equalization volume when determining minimum pump tank volumes		Bill Fenner, Aquapoint, 10/29/2017	Thank you
.0802	64	21	Delete (2)		ABCD Construction, 9/14/2017	Agree
.0802	64	21	Delete (2)		Andrew Daywalt, 9/25/2017	Agree
.0802	64	21	Delete (2)		Ben Hildreth, 9/25/2017	Agree
.0802	64	21	Delete (2)		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Agree
.0802	64	21	Delete (2)		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Agree
.0802	64	21	Delete (2)		Brian Beebe, 10/23/2017	Agree
.0802	64	21	Delete (2)		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Agree
.0802	64	21	Does this apply to conventional systems only? Would the same apply to advanced treatment applications? It would that the final treatment technology used would influent this more than the soil class or group.		Bruce Stowe, RGP, 10/31/2017	This applies to all systems. It is based on the Soil Group. Group IV soils (clay soils) have larger dose volumes, which would require a larger tank. There is language that allows a designer to propose a smaller pump tank based on certain criteria. Based on other comments, we have simplified this requirement. Pump tanks shall now be the same size as septic tanks.
.0802	64	21	Delete (2)		Cable Septic and Backhoe Service, 10/23/2017	Agree
.0802	64	21	Delete (2)		Charles Dodge, C&C Septic Services, 9/25/2017	Agree
.0802	64	21	Delete (2)		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Agree
.0802	64	21	Delete (2)		Charles Driggers, Driggers Septic Tank, 9/25/2017	Agree
.0802	64	21	Delete (2)		Charlie Brice, 9/25/2017	Agree
.0802	64	21	Delete (2)		Chris Hedrick, 9/25/2017	Agree
.0802	64	21	Delete (2)		Chriscoe Bacchoe Service, 10/23/2017	Agree
.0802	64	21	Delete (2)		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Agree
.0802	64	21	Delete (2)		Daniel Newsome, D&D Organic Farming, 10/24/2017	Agree
.0802	64	21	Delete (2)		Danny Dennis, 10/23/2017	Agree
.0802	64	21	Delete (2)		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Agree
.0802	64	21	Delete (2)		David Murphy, DRM, 10/24/2017	Agree
.0802	64	21	Delete (2)		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Agree
.0802	64	21	Delete (2)		Donald Martin, 10/23/2017	Agree

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.0802	64	21	WHILE THIS PUMP TANK SIZING IS CURRENTLY IN RULE, THE USE OF A PUMP TANK IS IN ITS CAPACITY. IT IS UNKNOWN IF 2/3 OF THE PUMP TANK SIZE IS ADEQUATE, BUT APPEARS THAT IT REDUCES EMERGENCY HOLDING CAPACITY, AND THIS DRAFT, IF INCLUDED, SHOULD INCLUDE ALL SOIL GROUPS, NOT JUST I, II, OR III SOILS.	KEEP PUMP TANK SIZE BASED ON IDENTICAL SIZE TO THE SEPTIC TANK OR BASED ON DISCHARGE REQUIREMENTS TO FULLY UTILIZED THE DISCHARGE EVENT. OR ALLOW ALL SOILS GROUPS TO USE 2/3RDS CAPACITY.	Doug Lassiter, NCSTA, 10/24/2017	Agree and have modified to require all pump tanks to be the same size as septic tanks.
.0802	64	21	This is a new formula and creates some confusion. How does this apply to the configuration necessary for the items in (3)?	Eliminate (2)	Doug Lassiter, NCSTA, 9/20/2017	Agree
.0802	64	21	Delete (2)		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Agree
.0802	64	21	Delete (2)		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Agree
.0802	64	21	Delete (2)		Garland Walker, 10/23/2017	Agree
.0802	64	21	Delete (2)		Gerald Leonard, 10/23/2017	Agree
.0802	64	21	Delete (2)		Hank Hill Grading, 10/23/2017	Agree
.0802	64	21	Delete (2)		Harry Hatcher, 9/25/2017	Agree
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.0802	64	21	Delete (2)		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Agree
.0802	64	21	Delete (2)		Jerry Pearce, 9/15/2017	Agree
.0802	64	21	Delete (2)		Johnny Strickland, 10/23/2017	Agree
.0802	64	21	Delete (2)		Kearns Pumping Service, 10/23/2017	Agree
.0802	64	21	Delete (2)		Keith Blackburn, B & C Concrete, 9/20/2017	Agree
.0802	64	21	Delete (2)		Kippy Blanks, 9/28/2017	Agree
.0802	64	21	Delete (2)		Larry Beam, 9/23/2017	Agree
.0802	64	21	Delete (2)		Lawrence Henning, 9/15/2017	Agree
.0802	64	21	Delete (2)		Lester Breedlove, 10/23/2017	Agree
.0802	64	21	Delete (2)		Mark Johnson, 10/23/2017	Agree
.0802	64	21	Delete (2)		Marty Maness, 10/23/2017	Agree
.0802	64	21	Delete (2)		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Agree
.0802	64	21	Delete (2)		Michael Barger, 9/25/2017	Agree
.0802	64	21	Delete (2)		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Agree
.0802	64	21	Delete (2)		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Agree
.0802	64	21	Delete (2)		Parrish Homes and Pools,Inc, 10/23/2017	Agree
.0802	64	21	Delete (2)		Pat Rentz, VIP Inspection Services, 9/25/2017	Agree
.0802	64	21	Delete (2)		Perry's Grading & Septic Service, 9/14/2017	Agree
.0802	64	21	Delete (2)		Randy Lackey, Love Valley Septic, 9/25/2017	Agree
.0802	64	21	Delete (2)		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Agree
.0802	64	21	Delete (2)		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Agree
.0802	64	21	Delete (2)		Ronnie Burgin, 9/25/2017	Agree
.0802	64	21	Delete (2)		Russell C. Trodgon, 9/18/2017	Agree
.0802	64	21	Delete (2)		Russell Lineberry, 10/23/2017	Agree

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.0802	64	21	Delete (2)		Sterlin Church, Church's Backhoe Service, 9/25/2017	Agree
.0802	64	21	Delete (2)		Steve Cannon, Rowan LHD, 9/25/2017	Agree
.0802	64	21	Delete (2)		Terry Maples, 10/23/2017	Agree
.0802	64	21	Delete (2)		TM Grading, Inc, 10/23/2017	Agree
.0802	64	21	Delete (2)		Tyler Jolley, 9/15/2017	Agree
.0802	64	21	Delete (2)		Valentina Oxendine, 10/23/2017	Agree
.0802	64	21	Delete (2)		Vince Scroggins, 9/14/2017	Agree
.0802	64	21	Delete (2)		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Agree
.0802	64	21	Delete (2)		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Agree
.0802	64	21	Delete (2)		Willilam Garrison, EcoClean Septic, 9/25/2017	Agree
.0802	64	25	If flow equalization is provided why would you also require 24 hours of storage? Some lesser degree of storage should be considered if flow equalization is provided. Also 24 hours may be excessive considering that during long power outages many typical activities such as laundry and bathing do not occur at the same frequency.		Joe Anlauf, Anlauf Engineering, PLLC, 10/17/2017	Agree and we have tried to address this with the proposed changes to the rules.
.0802	64	27	Is this a new requirement? (PE)		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Yes and is in line with what the PE Board would call engineering.
.0802	64	34	Delete freeboard		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. This has been revised so that a PE can use this criteria to calculate a different pump tank size. This criteria has been used in the past on a project specific basis with no problems.
.0802	64	34	Remove collection system		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. This has been revised so that a PE can use this criteria to calculate a different pump tank size. This criteria has been used in the past on a project specific basis with no problems.
.0802	65	7	Telemetry. What is telemetry? This is very vague. I would suggest that telemetry be defined. (1) Must call or email/text (email/text may be a stretch, telemetry was put in the rules before email/text were prevalent) continuously until the alarm condition is remedied or it is physically switched off. (2) Must be demonstrated on site during the final inspection. Merely saying we have telemetry is not enough; it needs to be demonstrated on site during the final inspection. This must be consistent throughout all systems.		Cory Brantley, 10/2/2017	Agree
.0803	66	1	Are the "grease tanks" referred herein synonomous with a large volume grease interceptor I.E. per IAPMO Z1001? We struggle with the terms "grease trap", usually a small volume separation device under the sink in a commerical kitchen vs "grease interceptor" usually a larger volume UST in the drain line between the kitchen drains and either an OWTS or a municipal sewer collection system. The terms get used interchangeably. The UPC distinguishes the two as follows: Grease trap < 50 gpm for 1-3 drains/sources, Grease interceptor > 50 gpm - multiple drains/sources/traps. We suggest that the term "grease interceptor" be adopted for this and other sections where it is referred to.		Bruce Stowe, RGP, 10/31/2017	Agree with concept, but will adapt terminology that mirrors what we have been using. Grease tanks will be the large outside the building tank, and grease traps will be located inside the building, generally under the sink.
.0803	66		Access and risers required? Watertight lids or six inches above.		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Riser requirements for grease tanks are listed in Rule .1402(f)(4).
.0803	66	1	Use ST for less than 1,000 capacity, use ST with bottom open PT for more, assume GT capacity is liquid capacity?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Thank you for your suggestion. I think this may be more confusing than what we have proposed.

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.0803	66	6	shall be 1250 not 1500		Glenn Hines, 10/29/2017	Disagree. While we like the idea of more grease tank capacity, we are trying to streamline the design daily flow where criteria change. 1,500 gallons per day is a common flow where design criteria change, so we will keep that flow.
.0803	66	7	THIS SUBSECTION EXPANDS THE DESIGNS NEEDING GREASE TANKS. HISTORICAL EVIDENCE SHOWS THAT FOG EFFLUENT ACTS DIFFERENTLY FROM DSE, AND THE PROPOSED RULES RECOGNIZE A COMPROMISE WITH SYSTEMS <1500 GPD AND THOSE MORE COMMERCIAL SYSTEMS OF >1500 GPD.	GOOD EXPANSION OF REQUIREMENTS FOR SYSTEMS THAT INCLUDE A RECOGNIZED FOG INCREASE.	Doug Lassiter, NCSTA, 10/24/2017	Thank you
.0803	66	8	Is 2:1 L/W ratio a minimum? If so, it should be stated as such.		Bruce Stowe, RGP, 10/31/2017	Agree
.0803	66	9	When multiple tanks are used to meet GI capacity greater than 1,500 gallons, can each tank have a 2:1 L/W ratio?		Bruce Stowe, RGP, 10/31/2017	Yes. Clarified that in the rules.
.0803	66	10	What size (width ration and four compartments)? Opening depth, etc.		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	See Rule .1402(f)
.0803	66	12	Shouldn't this item end with "or" as does item 2 in this section?		Chad Gambill, Caldwell County Health Dept, 10/31/2017	The "or" in Item (2) is for the list defined in Paragraph (e). One of those three methods can be used to size the grease trap. It is based on the largest size of the three.
.0803	66	12	Should be grease trap plumbing code?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Plumbing code uses the term grease interceptor and IAPMO uses the terms grease trap and grease interceptor. We have decided to use the term grease trap for under the sink grease removal devices and grease tank for outside the facility grease removal devices.
.0803	66	28	"with intake at least 50% below of liquid level"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	See Rule .1402(f)
.0803	66	30	"at least 50% of liquid depth"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	See Rule .1402(f)
.0803	66	32	Clarification - grease trap vs grease interceptor		Bruce Stowe, RGP, 10/31/2017	Agree
.0803	66	33	"and approved by the State" - design approval or product approval? New?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Yes. Clarification of how to propose an alternate design.
.0803	66	35	"interceptors" - traps and interceptors - oil/water separators??		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	This does not include oil/water separators. The term oil/water separator is generally used for hydrocarbon type oils that can be found in the petroleum industry.
.0803	66	35	Does not necessarily have to be maintained by a permitted septage management firm.		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	In accordance with G.S 130A-291.1(c), only a septage management firm may remove grease from a grease trap or tank.
.0803	66	1 to 4	Not clear – does this mean a grease interceptor is also required when the grease tank is required? Or only in high FOG conditions? Is a grease tank still required for all food service facilities, not just where the accumulation of FOG may cause premature failure?		Len Gilstrap, Carteret LHD, 10/31/2017	Agree. Have tried to clarify language. Either a grease tank or a grease tank with a grease trap may be used.
.0803	66	15 to 25	Remove		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. This is the current method for sizing grease tanks. What we are changing is the tank capacity over a certain size to try and optimize grease removal.
.0803	66	32 to 36	inside grease trap		Glenn Hines, 10/29/2017	Agree with modifications. Language does include the use of an inside the building grease interceptor in addition to an outside grease tank.

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.0805	67	13	Tank manufacturing also stood out. It is a proven fact that we have a problem with "Mid Seam" concrete tanks leaking. This is documented by regulators as well as private inspector folks . I think we need to address this well over due issue. That is not say ALL mid seam tanks leak. I have been told by a gentlemen that has tremendous knowledge on precast tanks, that there is a mid seam tank design that will address this leaking issue. However the only way we will know for sure we have corrected this issue is to leak test them. Maybe in time we can relax this as seen to be fit.		Keith Vernon, Vernon Septic Systems, 10/25/2017	Agree. However, based on comments received we are deleting this Paragraph.
.0805	67	13 to 15	Tank Structural Integrity. . . (a) Specifies that 10% of ALL tanks installed in each county should be tested for structural integrity on the job site or at the tank yard. This office is OPPOSED to this, as this will place an ADDITIONAL BURDEN on the LHD Staff of requiring more time on the job site/tank yard and may NOT have the appropriate legal enforcement action that would need to be taken if the tanks do not meet the standards. This office would suggest that the State office perform TANK YARD inspections and be able to review and approve the manufacturing process/quality control of these tanks. The State issues the Tank manufacture the approval to make the tanks therefore the burden of inspection/quality control should lie with the State Office.		David Swinney, ARHS, 10/31/2017	Agree and this Paragraph has been deleted. OSWP will bring back state level tank yard inspections.
.0805	67	13 to 36	Water fitness checks	Make it mandatory for all systems AFTER installation. We test everything else for functionality....why exactly are we not testing tanks for functiionality after we have buried them? We've done it for a decade or more with pre-treatment systems. It is not nearly as troublesome as everyone makes it out to be. Yet it is the single most important part of the system. We support water fitness testing for all tanks post installation.	Steve Barry, AQWA, 10/31/2017	Agree. However, based on comments received we are deleting this Paragraph.
.0805	67	14	Concerned about the LHD feasibility of getting this accomplished. Installers use tanks from other counties. How will all of this be tracked? How will duplication of effort be avoided? Was the cost of a rebound hammer, and keeping it calibrated, included in the fiscal note?		Angela Mann, Wilson LHD, 9/20/2017	Agree and this Paragraph has been deleted.
.0805	67	14	Who is responsible for keeping a count of the number of tanks installed in a particular county? Are those countys audited and the results made public? I see several potential problems that could arise with this policy. I read this fiscal note. I think the rule in its current form will be cost prohibitive to small manufacturers and may drive costs higher than projected. I do not support this rule in its current form.		Cory Brantley, 10/2/2017	Agree and this Paragraph has been deleted. OSWP will bring back state level tank yard inspections.
.0805	67	14	LHD will not be able to do the 10% of the tank testing		Daniel Allen, Carteret LHD, 9/20/2017	Agree and this Paragraph has been deleted.
.0805	67	14	THIS ATTEMPT OF IMPROVING TANK QUALITY IS FLAWED IN BOTH EQUITY ACROSS ALL MATERIALS AND IN ITS ABILITY TO BE IMPLEMENTED BY LHDs EQUALLY TO ALL TANK MANUFACTURERS. THE STRUCTURE OF "10% OF ALL TANKS IN EACH COUNTY" DOES NOT ADDRESS TANKS OF VARIOUS SIZES IN THE WHOLE POPULATION (For example, can 10% be met with all manufacturers, with all sizes from all forms, etc.)	ELIMINATE THE PROPOSED QA PROGRAM. THE LHDs HAVE CONSISTENTLY STATED THEY HAVEN'T THE TIME OR MANPOWER FOR SUCH A TESTING PROTOCOL. IT APPEARS ONLY THE FULLY FUNDED LHDs SUCH AS WAKE AND ORANGE HAVE COMMITTED TO THIS, AND THESE ARE TWO OF THE COUNTIES THAT HAVE CHOSEN TO ABANDON THE STATE RULES FOR LOCAL RULES. CONSIDER A PROPOSAL THAT WOULD PROVIDE AN EQUAL REQUIREMENT THAT LHDs AND STATE PERSONNEL WOULD TEST TANKS AT MANUFACTURING SITES OR WHOLESALE DEALERS.	Doug Lassiter, NCSTA, 10/24/2017	Agree and this Paragraph has been deleted. OSWP will bring back state level tank yard inspections.

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.0805	67	14	On (a) the Quality Control Program proposed to be required by the Department develops the ability to select a QA verification by material of manufacture, not as a method of performance to be equally applied to all tanks. This has been one of the basic requirements for the North Carolina Septic Tank Association in approaching the Periodic Review and Elimination of Rules.		Doug Lassiter, NCSTA, 9/20/2017	Agree and this Paragraph has been deleted. OSWP will bring back state level tank yard inspections.
.0805	67	14	Paragraph (a) deliberately established separate methods of QA for the type of materials used in manufacture. And in the case of (1) creats a system most likely to be used by North Carolina manufacturers using precast concrete, where 10% of the tanks in every county should be tested for structural integrity. Under this language, does 10% mean that the first tank or the tenth tank delivered to the county meets the requirements? And this is the only QA program listed that would be able to be verified by an authorized agent of the Department. A proposed third party QA program may be the most appropriate for a manufacturer of tanks marketing in many locations across the United States and the most cost-effective. However, it would still be impossible for this to be considered equal to 10% in every county in North Carolina. The Department continues to offer instruction to their authorized agents on how to verify structural integrity for precast concrete tanks, while the Department personnel has maintained that neither the local government nor the Department has the expertise or the equipment to verify the structural integrity fo the thermoplastic or fiberglass tanks. The bottom line is that the Department acknowledges to its authorized agents to only test precast concrete tanks.	Eliminate (a)	Doug Lassiter, NCSTA, 9/20/2017	Agree and this Paragraph has been deleted. OSWP will bring back state level tank yard inspections.
.0805	67	14	Wake County supports this		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree. However, based on comments received we are deleting this Paragraph.
.0805	67	14	Ten percent of all tanks tested, while we agree it is needed, this will be impossible to do. LHD will need necessary equipment, staffing and methodology, not including how to track the 10%.	Revise to not include LHD or add State assistance	Len Gilstrap, Carteret LHD, 9/20/2017	Agree and this Paragraph has been deleted. OSWP will bring back state level tank yard inspections.
.0805	67	14	This is part of a proposed required Quality Control plan that is poorly drafted and cannot be fairly or adequately conducted. This section give the local health department the authority to test concrete tanks to fill this 10%, but the State has told the local health departments that they haven't got the expertise or the equipment to test plastic or fiberglass tanks for strength. Instead, they get to use an annual audit from a third-party. That 's not the same as 10% of tanks sold in each county in North Carolina, and the result is that the only tanks that will get tested at the job site will be concrete tanks.	Eliminate (a)	Russ Ayers, Bennie Moore Septic Tank, 9/20/2017	Agree and this Paragraph has been deleted. OSWP will bring back state level tank yard inspections.
.0805	67	14 to 15	(a) testing 10% of all tanks is not feasible for most counties. Delete		Len Gilstrap, Carteret LHD, 10/31/2017	Agree
.0805	67	14 to 23	Delete		ABCD Construction, 9/14/2017	Agree
.0805	67	14 to 23	Delete		Andrew Daywalt, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Ben Hildreth, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Brian Beebe, 10/23/2017	Agree
.0805	67	14 to 23	Delete		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Agree

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.0805	67	14 to 23	Delete		Cable Septic and Backhoe Service, 10/23/2017	Agree
.0805	67	14 to 23	Delete		Charles Dodge, C&C Septic Services, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Charles Driggers, Driggers Septic Tank, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Charlie Brice, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Chris Hedrick, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Chriscoe Bacchoe Service, 10/23/2017	Agree
.0805	67	14 to 23	Delete		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Agree
.0805	67	14 to 23	Delete		Daniel Newsome, D&D Organic Farming, 10/24/2017	Agree
.0805	67	14 to 23	Delete		Danny Dennis, 10/23/2017	Agree
.0805	67	14 to 23	Delete		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Agree
.0805	67	14 to 23	Delete		David Murphy, DRM, 10/24/2017	Agree
.0805	67	14 to 23	Delete		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Donald Martin, 10/23/2017	Agree
.0805	67	14 to 23	Delete		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Agree
.0805	67	14 to 23	Delete		Garland Walker, 10/23/2017	Agree
.0805	67	14 to 23	Delete		Gerald Leonard, 10/23/2017	Agree
.0805	67	14 to 23	Delete		Hank Hill Grading, 10/23/2017	Agree
.0805	67	14 to 23	Delete		Harry Hatcher, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Jeff Link, Rowan, LHD, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Jerry Pearce, 9/15/2017	Agree
.0805	67	14 to 23	Delete		Johnny Strickland, 10/23/2017	Agree
.0805	67	14 to 23	Delete		Kearns Pumping Service, 10/23/2017	Agree
.0805	67	14 to 23	Delete		Keith Blackburn, B & C Concrete, 9/20/2017	Agree
.0805	67	14 to 23	Delete		Kippy Blanks, 9/28/2017	Agree
.0805	67	14 to 23	Delete		Larry Beam, 9/23/2017	Agree
.0805	67	14 to 23	Delete		Lawrence Henning, 9/15/2017	Agree
.0805	67	14 to 23	Delete		Lester Breedlove, 10/23/2017	Agree
.0805	67	14 to 23	Delete		Mark Johnson, 10/23/2017	Agree
.0805	67	14 to 23	Delete		Marty Maness, 10/23/2017	Agree
.0805	67	14 to 23	Delete		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Agree
.0805	67	14 to 23	Delete		Michael Barger, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Agree

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.0805	67	14 to 23	Delete		Parrish Homes and Pools,Inc, 10/23/2017	Agree
.0805	67	14 to 23	Delete		Pat Rentz, VIP Inspection Services, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Perry's Grading & Septic Service, 9/14/2017	Agree
.0805	67	14 to 23	Delete		Randy Lackey, Love Valley Septic, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Agree
.0805	67	14 to 23	Delete		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Agree
.0805	67	14 to 23	Delete		Ronnie Burgin, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Russell C. Trodgon, 9/18/2017	Agree
.0805	67	14 to 23	Delete		Russell Lineberry, 10/23/2017	Agree
.0805	67	14 to 23	Delete		Sterlin Church, Church's Backhoe Service, 9/25/2017	Agree
.0805	67	14 to 23	Delete		Steve Cannon, Rowan LHD, 9/25/2017	Agree
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.0805	67	14 to 23	Delete		TM Grading, Inc, 10/23/2017	Agree
.0805	67	14 to 23	Delete		Tyler Jolley, 9/15/2017	Agree
.0805	67	14 to 23	Delete		Valentina Oxendine, 10/23/2017	Agree
.0805	67	14 to 23	Delete		Vince Scroggins, 9/14/2017	Agree
.0805	67	14 to 23	Delete		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Agree
.0805	67	14 to 23	Delete		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Agree
.0805	67	14 to 23	Delete		Willilam Garrison, EcoClean Septic, 9/25/2017	Agree
.0805	67	18	Will IAMPO Z1000 or CSA B66 listing/continuous compliance program satisfy this requirement?		Bruce Stowe, RGP, 10/31/2017	Paragraph has been deleted.
.0805	67	18, 21	The third party quailty assurance program. Who administers this? It is up to the manufacturer to find this person?		Cory Brantley, 10/2/2017	Paragraph has been deleted.
.0805	67	24	You should mandate a well test if a septic system is determined to be leaking. You should mandate that the nearest well water to a leaking tank that does not have a well get tested.		Anthony Lamando, Advantage Inspection, 9/1/2017	Agree with concept, but would be impossible to enforce. It is very difficult to determine if a septic tank is leaking. If the well is located upgradient of the septic tank, and the septic tank is found to be leaking, it would still be difficult to require since the well is not in the direct flow path of the septic tank.
.0805	67	26	Who determines this soil wetness condition? Is it the environmental health specialist?		Cory Brantley, 10/2/2017	Yes
.0805	67	26	with 1' scum		Glenn Hines, 10/29/2017	Following up with Glen Hines about his comment.
.0805	67	28	If the system has advanced pretreatment, or for any drip installation, the state approval calls for water testing 2 inches into the risers of the tanks. Do the innovative approvals supercede these rules? Shoud the rules state "or as specified in the system approval"?		Kim Warren, Chatham County Health Dept, 10/30/2017	A tank manufacturer or product manufacturer may propose an alternate leak test that is approved by the State and included in their approval.
.0805	67	28 to 29	I understand advanced pretreatment, but any PE design? Some PE's are designing gravity systems for clients. The additional time and energy will raise prices for the consumer on simple systems.		Cory Brantley, 10/2/2017	Agree and language has been modified to reflect when required by the PE in the approved plans and specifications.

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.0805	67	28 to 29	Why are tanks installed as part of an advanced pretreatment system or engineered system held to a different standard of leak testing than those for LPP, aerobic drip, and conventional systems? While leak testing is an admirable goal in practice the leak testing requirements place an additional cost and time element only on those systems which acts to discourage their use. All tanks assembled in the field should be leak tested after installation regardless of type of system.		Bill Fenner, Aquapoint, 10/29/2017	Agree and language has been modified to reflect when required in the approval.
.0805	67	29	All PE design systems or tanks designed by PE? Not clear.		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree and clarified
.0805	67	29	And any tank to be assembled onsite.		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0805	67	30	Incorporate Tank Performance, Integrity and Leak Testing Standards per ASTM 1227 – 13		Alan Clapp, LSS, 10/24/2017	This section has been deleted.
.0805	67	30	The rules should be consistent across all products. Concrete, plastic, fiberglass. The leak test should be the same.		Cory Brantley, 10/2/2017	This section has been deleted.
.0805	67	30	I support the requirement for water filling septic tanks manufactured using porous materials for 24 hours , such that the concrete is allowed to become saturated prior to the watertightness test. This allows the tester to differentiate between loss of water volume due to absorption by the concrete and loss of water volume due to leakage. Non-porous materials, such as thermoplastics and FRP, do not require a pre-test saturation step and can be watertightness tested immediately after being filled. This test method is supported by the watertightness testing procedure in IAPMO/ANSI Z1000-2013, which recognizes and provides a methodology for porous and non-porous materials. I serve as the chairman of the IAPMO/ANSI Z1000-2013 Technical Subcommittee.	No proposed change	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	This section has been deleted.
.0805	67	30	I like the shorter leak test on tanks.		Joe Anlauf, Anlauf Engineering, PLLC, 10/17/2017	This section has been deleted.
.0805	67	32	Use method prescribed by D'Amato and Devkota, NPCA, and as approved for IWWS-2015-02		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		ABCD Construction, 9/14/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Andrew Daywalt, 9/25/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Ben Hildreth, 9/25/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Benny Myers, Myers Septic Tanks Co, 9/25/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Brian Beebe, 10/23/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Cable Septic and Backhoe Service, 10/23/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Charles Dodge, C&C Septic Services, 9/25/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Charles Driggers, Driggers Septic Tank, 9/25/2017	This section has been deleted.

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.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Chris Hedrick, 9/25/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Chriscoe Bacchoe Service, 10/23/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Daniel Newsome, D&D Organic Farming, 10/24/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Danny Dennis, 10/23/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		David Murphy, DRM, 10/24/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Derrick Driggers, Driggers Septic Tank, 9/25/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Donald Martin, 10/23/2017	This section has been deleted.
.0805	67	34	THIS TESTING PROCEDURE OF A 24 HR. DEMONSTRATION IS FOUND IN STANDARDS FOR TANKS, BUT THE LHDs HAVE FOUND THIS RETURN TRIP COSTLY AND BURDENSOME. MOREOVER, THIS IS A HYBRID TEST SINCE IT ONLY PLACES THE 24 HR. FEATURE ON "POROUS" MATERIALS AND NOT ALL TANKS, WITHOUT MENTION OF NON-POROUS MATERIALS. SINCE LEAKAGE CAN RESULT IN OTHER AREAS OTHER THAN AS A RESULT OF POROUS (THROUGH THE WALL) ACTIVITY, IF THE HYDROSTATIC TEST IS APPLIED, IT SHOULD APPLY TO ANY TANK STRUCTURE	KEEP THE OPTION OF HYDROSTATIC TESTING, BUT ELIMINATE TESTING PROTOCOL DIFFERENCES. WHILE THE CONCRETE MATERIAL MAY BE CONSIDERED POROUS, THIS IS NOT AN INDICATION THAT NON-POROUS MATERIAL WOULD REMAIN WATERTIGHT AFTER 24 HOURS.	Doug Lassiter, NCSTA, 10/24/2017	This section has been deleted.
.0805	67	34	This language is unnecessary and burdensome to the specific material mentioned (concrete) and purposely omits the knowledge that active leaks (visible flowing as described in (E) of this Subsection) will immediately be noticed by the authorized agent.	Eliminate (B)	Doug Lassiter, NCSTA, 9/20/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Garland Walker, 10/23/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Gerald Leonard, 10/23/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Hank Hill Grading, 10/23/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Harry Hatcher, 9/25/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Jeff Link, Rowan, LHD, 9/25/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Jerry Pearce, 9/15/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Johnny Strickland, 10/23/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Kearns Pumping Service, 10/23/2017	This section has been deleted.

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.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Kippy Blanks, 9/28/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Larry Beam, 9/23/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Lawrence Henning, 9/15/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Lester Breedlove, 10/23/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Mark Johnson, 10/23/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Marty Maness, 10/23/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Max Locklear, Locklear's Backhoe Service, 10/23/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Michael Barger, 9/25/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Parrish Homes and Pools,Inc, 10/23/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Pat Rentz, VIP Inspection Services, 9/25/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Perry's Grading & Septic Service, 9/14/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Randy Lackey, Love Valley Septic, 9/25/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Robert F. Youngblood, Youngblood Construction, 9/14/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Ronnie Burgin, 9/25/2017	This section has been deleted.
.0805	67	34	This part of the proposed rules apply to the leak testing at the jobsite or yard. The section for watertesting the tank requires a return trip for the installer choosing concrete tanks but says nothing about plastic tanks. While concrete is technically a porous material, there is no reason to require a 24 hour revisit when the inspecttor is looking for a "visible flow" as described in Section (E).	Eliminate (B)	Russ Ayers, Bennie Moore Septic Tank, 9/20/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Russell C. Trodgon, 9/18/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Russell Lineberry, 10/23/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Sterlin Church, Church's Backhoe Service, 9/25/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Steve Cannon, Rowan LHD, 9/25/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Terry Maples, 10/23/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		TM Grading, Inc, 10/23/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Tyler Jolley, 9/15/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Valentina Oxendine, 10/23/2017	This section has been deleted.

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.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	This section has been deleted.
.0805	67	34	Delete "if the tank is made of material that absorbs water (such as concrete) and refill to the tank outlet"		Willilam Garrison, EcoClean Septic, 9/25/2017	This section has been deleted.
.0805	67	34 to 36	The LHD is not able to stand around at the site for one hour after tank is re-filled.	One hour after refilling should be deleted	Len Gilstrap, Carteret LHD, 9/20/2017	This section has been deleted.
.0805	67	36	(C) Leak testing procedure (let it site 1 hour after refilling) – are we supposed to sit there for an hour and wait? Not feasible. Delete		Len Gilstrap, Carteret LHD, 10/31/2017	This section has been deleted.
.0805	68	5	Subject to manufacturer's instructions for insitu vacuum testing.		Bruce Stowe, RGP, 10/31/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		ABCD Construction, 9/14/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Andrew Daywalt, 9/25/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Ben Hildreth, 9/25/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Benny Myers, Myers Septic Tanks Co, 9/25/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Brian Beebe, 10/23/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Cable Septic and Backhoe Service, 10/23/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Charles Dodge, C&C Septic Services, 9/25/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Charles Driggers, Driggers Septic Tank, 9/25/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Charlie Brice, 9/25/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Chris Hedrick, 9/25/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Chriscoe Bacchoe Service, 10/23/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	This section has been deleted.
.0805	68	8	The current procedure is 5 inches of negative pressure for two minutes. This standard has been in place for some time now, it tests both strength and water tightness. It should be left as is.	If we are really interested in making tanks better, a leak test by vacuum or water should be done on all tanks before they leave the manufacturer's site. Job site testing is difficult, expensive, and it potentially puts the LHD personnel in a tough spot of making someone pull a tank out of the ground if it fails. However, testing before it is delivered to the job site would negate some of these issues. This would have to be limited, only on tanks that are delivered in one piece. Large multi-piece 3/5/7/10 thousand gallons tanks would have to be tested on site.	Cory Brantley, 10/2/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Daniel Newsome, D&D Organic Farming, 10/24/2017	This section has been deleted.

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.0805	68	8	Change to 5 inches of mercury		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		David Murphy, DRM, 10/24/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Derrick Driggers, Driggers Septic Tank, 9/25/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Donald Martin, 10/23/2017	This section has been deleted.
.0805	68	8	THIS PROPOSAL ALLOWS FOR A VACUUM TEST IN THE FIELD, BUT THE LIMIT FOR TESTING IS ONLY 2.5 INCHES OF MERCURY. IF THE STATE OF NORTH CAROLINA IS TRULY INTENT ON QUALITY ASSURANCE FOR ALL TANKS, THIS STANDARD IS A POOR ATTEMPT. KEEP THE VACUUM TEST AT THE SAME LEVEL FOR DETERMINING 300 PSF IN ADDITION TO ALL OTHER LOADS (AS STATED IN 15A NCAC 18E .1403). THIS WAY, THE MANUFACTURER WOULD BE MORE LIKELY TO CONTINUE QUALITY PROGRAM.	VACUUM PRESSURE TESTING SHALL BE TESTED TO 5 INCHES OF MERCURY FOR TWO MINUTES FOR ALL TANKS OF ALL MATERIALS.	Doug Lassiter, N CSTA, 10/24/2017	This section has been deleted.
.0805	68	8	If a tank is to be test for structural integrity, it should be verified that the initial approval for the tank is being followed. This is not 2.5 inches which amounts to only an approximate 144 pounds per square foot, not the required 300 pounds per square foot.	Go back to five inches of mercury for two minutes	Doug Lassiter, NCSTA, 9/20/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Garland Walker, 10/23/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Gerald Leonard, 10/23/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Hank Hill Grading, 10/23/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Harry Hatcher, 9/25/2017	This section has been deleted.
.0805	68	8	Use 5 inches as proposed by D'Amato and Devkota		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Jeff Link, Rowan, LHD, 9/25/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Jerry Pearce, 9/15/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Johnny Strickland, 10/23/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Kearns Pumping Service, 10/23/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Keith Blackburn, B & C Concrete, 9/20/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Kippy Blanks, 9/28/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Larry Beam, 9/23/2017	This section has been deleted.
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.0805	68	8	Change to 5 inches of mercury		Mark Johnson, 10/23/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Marty Maness, 10/23/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Max Locklear, Locklear's Backhoe Service, 10/23/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Michael Barger, 9/25/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	This section has been deleted.

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.0805	68	8	Change to 5 inches of mercury		Parrish Homes and Pools,Inc, 10/23/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Pat Rentz, VIP Inspection Services, 9/25/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Perry's Grading & Septic Service, 9/14/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Randy Lackey, Love Valley Septic, 9/25/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Robert F. Youngblood, Youngblood Construction, 9/14/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Ronnie Burgin, 9/25/2017	This section has been deleted.
.0805	68	8	This proposal is next to useless. A vacuum pressure of 2/5 many not even produce a reasonable verification of leak testing. In years of industry experience, I have never seen this limit placed on any tank in North Carolina. For the State to place this limit on a tank is short-sighted, since the local health department could use this test to bring vacuum to 5 inches of mercury and test for both leakage and structural fitness. If the State wants a quality control program, why would they miss such an obvious chance to test the tank?	Go back to five inches of mercury for two minutes	Russ Ayers, Bennie Moore Septic Tank, 9/20/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Russell C. Trodgon, 9/18/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Russell Lineberry, 10/23/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Sterlin Church, Church's Backhoe Service, 9/25/2017	This section has been deleted.
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.0805	68	8	Change to 5 inches of mercury		Terry Maples, 10/23/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		TM Grading, Inc, 10/23/2017	This section has been deleted.
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.0805	68	8	Change to 5 inches of mercury		Valentina Oxendine, 10/23/2017	This section has been deleted.
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.0805	68	8	Change to 5 inches of mercury		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	This section has been deleted.
.0805	68	8	Change to 5 inches of mercury		Willilam Garrison, EcoClean Septic, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		ABCD Construction, 9/14/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Andrew Daywalt, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Ben Hildreth, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Benny Myers, Myers Septic Tanks Co, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Brian Beebe, 10/23/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Cable Septic and Backhoe Service, 10/23/2017	This section has been deleted.

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.0805	68	9	Change to 2 minutes		Charles Dodge, C&C Septic Services, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Charles Driggers, Driggers Septic Tank, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Charlie Brice, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Chris Hedrick, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Chriscoe Bacchoe Service, 10/23/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Daniel Newsome, D&D Organic Farming, 10/24/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Danny Dennis, 10/23/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		David Murphy, DRM, 10/24/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Derrick Driggers, Driggers Septic Tank, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Donald Martin, 10/23/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Garland Walker, 10/23/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Gerald Leonard, 10/23/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Hank Hill Grading, 10/23/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Harry Hatcher, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Jeff Link, Rowan, LHD, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Jerry Pearce, 9/15/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Johnny Strickland, 10/23/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Kearns Pumping Service, 10/23/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Keith Blackburn, B & C Concrete, 9/20/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Kippy Blanks, 9/28/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Larry Beam, 9/23/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Lawrence Henning, 9/15/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Lester Breedlove, 10/23/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Mark Johnson, 10/23/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Marty Maness, 10/23/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Max Locklear, Locklear's Backhoe Service, 10/23/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Michael Barger, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Parrish Homes and Pools,Inc, 10/23/2017	This section has been deleted.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0805	68	9	Change to 2 minutes		Pat Rentz, VIP Inspection Services, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Perry's Grading & Septic Service, 9/14/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Randy Lackey, Love Valley Septic, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Robert F. Youngblood, Youngblood Construction, 9/14/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Ronnie Burgin, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Russell C. Trodgon, 9/18/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Russell Lineberry, 10/23/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Sterlin Church, Church's Backhoe Service, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Steve Cannon, Rowan LHD, 9/25/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Terry Maples, 10/23/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		TM Grading, Inc, 10/23/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Tyler Jolley, 9/15/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Valentina Oxendine, 10/23/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Vince Scroggins, 9/14/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	This section has been deleted.
.0805	68	9	Change to 2 minutes		Willilam Garrison, EcoClean Septic, 9/25/2017	This section has been deleted.
.0806	68	23	PT installation, GT, siphon and other tanks installation criterion?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Yes
.0806	67	26	Why are we leak testing a pump tank but not a septic tank? Why are we leak testing a pretreatment system or PE system, but not all tanks? Why are we excluding conventional systems?		Steve Barry, AQWA, 10/2/2017	Agree. Language has been modified to better reflect current requirements for leak testing. Agree with leak testing all tanks, but that concept is not supported by the entire industry at this time.
.0806	68	26	Specifies three inch pipe	This should say three inches or greater sized pipe	Cory Brantley, 10/2/2017	Agree
.0806	68	29	Is the intent that this outlet pipe is provided by the tank mfgr with the prefabricated tank or provided by the installer for assembly at the installation site? What is the significance of two feet of length? If the pipe extends from the tank outlet tee to the distribution box/pump tank/next segment of the treatment train without a mechanical joint, is that considered compliant? Is the intent of this that the outlet pipe should be a minimum of 2 ft in length?		Bruce Stowe, RGP, 10/31/2017	Pipe is provided by installer, not tank manufacturer. Language has been modified to "a minimum of two feet".
.0806	68	29	"Tank outlet pipe shall …..and extending two feet beyond the tank outlet" Should this say "at least" 2' or something because just specifying 2' indicates we can't approve anything except exactly 2'.		Chad Gambill, Caldwell County Health Dept, 10/31/2017	Agree
.0806	68	29	As written the rule could tie us to requiring exactly 2 feet. Which would be irritating and at times counter productive.	"(b) The tank outlet pipe shall be inserted through the outlet pipe penetration, creating a watertight joint, and extending at least 2 feet beyond the tank outlet."	Connie Adams, Caldwell LHD, 10/31/2017	Agree
.0806	68	31	Field practice lacking?? How to get 2 feet of undisturbed soil beyond tank?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. This installation practice is not unreasonable and can be accomplished relatively easily.
.0806	68	31	"shall be placed level on …"			Agree. However, the initial pipe exiting the septic tank must be level so that the effluent filter is level in the septic tank.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0806	68	32	Contradicts with 1% slope requirement		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree. However, the initial pipe exiting the septic tank must be level so that the effluent filter is level in the septic tank.
.0806	68	33	Risers to grade should be required over every effluent filter. An effluent filter without access will not be maintained.	Add the following: (a)(4) A riser brought to grade shall be installed to provide access to the effluent filter for removal and maintenance.	Bill Fenner, Aquapoint, 10/29/2017	Agree in concept. G.S. 130A-335.1(b)(4) only requires that the access device come to within six inches of the finished grade. We cannot require the risers to come to grade for all septic tanks.
.0806	68	33	All septic tank should have risers that extend above finished grade. This promotes proper maintenance. It saves customers money during pump out. It allows access to the effluent filter without digging.		Cory Brantley, 10/2/2017	Agree in concept. G.S. 130A-335.1(b)(4) only requires that the access device come to within six inches of the finished grade. We cannot require the risers to come to grade for all septic tanks.
.0806	68	33	all septic tanks shall have min. 2 access to finish grader or higher		Glenn Hines, 10/29/2017	Agree in concept. G.S. 130A-335.1(b)(4) only requires that the access device come to within six inches of the finished grade. We cannot require the risers to come to grade for all septic tanks.
.0806	68	33	Both, bring to grade with watertight seals and shedding water		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree in concept. G.S. 130A-335.1(b)(4) only requires that the access device come to within six inches of the finished grade. We cannot require the risers to come to grade for all septic tanks.
.0806	68	33	The other needed improvement on septic tanks are risers. Those effluent filters or effluent screens (which ever they are called) are items that need to be serviced. It just makes sense to put access risers on the tank to be able to service those effluent filters. By having easy access folks will service them more often. Which in turn insure the quality of effluent that was the objective in the beginning.		Keith Vernon, Vernon Septic Systems, 10/25/2017	Agree in concept. G.S. 130A-335.1(b)(4) only requires that the access device come to within six inches of the finished grade. We cannot require the risers to come to grade for all septic tanks.
.0806	68	33	I have long maintained that if you want to make meaningful change to these rules, require risers extending above grade on both ends of the septic tank. It provides easy maintenance and a reminder that there is a tank there that does not need to be driven over. The tank pumper needs access to both ends of the tank for pumping and for cleaning the effluent filter. The risers will probably pay for themselves after one pumping when the pumper has to locate and dig up the access openings.		Kim Warren, Chatham County Health Dept, 10/30/2017	Agree in concept. G.S. 130A-335.1(b)(4) only requires that the access device come to within six inches of the finished grade. We cannot require the risers to come to grade for all septic tanks.
.0806	68	33	Septic tank riser depths	Please bring risers to grade. Enough is enough. Burying something that is going to need routine maintenance to continue to function is not proactive or sustainable.	Steve Barry, AQWA, 10/31/2017	Agree in concept. G.S. 130A-335.1(b)(4) only requires that the access device come to within six inches of the finished grade. We cannot require the risers to come to grade for all septic tanks.
.0806	68	33	All septic tanks need risers for access to effluent filters.	Risers should extend three inches minimum above grade.	Tim Barbee, 10/27/2017	Agree in concept. G.S. 130A-335.1(b)(4) only requires that the access device come to within six inches of the finished grade. We cannot require the risers to come to grade for all septic tanks.
.0806	69	2	Delete "and installed in accordance with the tank manufacturer's instructions and industry standards"	Amend as follows "(f) The bottom of the tank shall be installed level in undisturbed or compacted soil, or bedded using sand, gravel, stone or other equivalent approved material."	Doug Lassiter, NCSTA, 10/2/2017	Agree
.0806	69	5	Delete (g). This is not the place for this language as it clearly referenced in .0805. Just duplication of language.		Doug Lassiter, NCSTA, 10/2/2017	Agree

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0900 .1000 .1200 .1500 .1600	All	All	All of these Sections address the variuous types of wastewater systems, siting design, siting criteria, credits, and etc. These Sections need to be organized in a logical sequencing order, revised, and condensed as much as possible. We recommend organizing all systems in the following order: 1--treatment level and credits; 2--dispersal method and credits; 3--types of approved systems that meet those criteria. The techincial specifications and requirements of each particular approved system should be kept as a reference document for its' specific requirements rather than trying to put them into Rules, as they will be subject to change by the manufacturer.	All of these Sections address the variuous types of wastewater systems, siting design, siting criteria, credits, and etc. These Sections need to be organized in a logical sequencing order, revised, and condensed as much as possible. We recommend organizing all systems in the following order: 1--treatment level and credits; 2--dispersal method and credits; 3--types of approved systems that meet those criteria. The techincial specifications and requirements of each particular approved system should be kept as a reference document for its' specific requirements rather than trying to put them into Rules, as they will be subject to change by the manufacturer.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Thank you for your suggestions. The organization of 18E is based upon the steps in the permitting process, including the system types (application, design flow, soils, siting, tanks, drainfields, pump systems, advanced pretreatment, O&M) followed by the specifics of various components of the wastewater system (tanks, RWTS, and PIA systems). We have tried to keep the minimum required information in the rules, as needed, and have the manufacturer supply their details as part of the approval process of the product.
.0901	69		All sites with <24" total soil depth with or without pretreatment should require pressure dispersal.		Tom Ashton, American Manufacturing Company, 10/31/2017	Disagree. In the past the Branch has interpreted the use of less than 24 inches without pressure dispersal. While the interpretation has changed some over the years, there is no indication that we have had problems with those gravity fed sites.
.0901	69	17	"12" of naturally occurring soil is on the downslope side of the trench…" Should this say upslope side of the trench or are we not going to do slope correction anymore? This is also in .0901 d 3 and .902 d 3. Would the use of "downslope side in .902 d 3 result in infiltrator products losing their reduction in systems installed with the downslope side close to 36" where the back of the trench is >36"?		Chad Gambill, Caldwell County Health Dept, 10/31/2017	Agree with modifications. It should be upslope, not downslope, and we are still incorporating slope correction. It has been removed from this Paragraph and listed elsewhere.
.0901	69	17	very consequential typo--please correct!! If 12" on downslope side, there will be less than 12" to unsuitable on the upslope side!	"(1) 12 inches of naturally occurring soil is on the **upslope** side of the trench between the infiltrative surface and any limiting condition. . . "	Connie Adams, Caldwell LHD, 10/31/2017	Agree with modifications. It should be upslope, not downslope, and we are still incorporating slope correction. It has been removed from this Paragraph and listed elsewhere.
.0901	69	17	What is trench?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	See definition in Rule .0105.
.0901	69	17	"trench bottom between …"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. See definitions of trench and infiltrative surface in Rule .0105.
.0901	69	18	Group I, II, III		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. See definition of limiting condition in Rule .0105.
.0901	69	20	trench bottom, side walls are also infiltrative surfaces		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree. However, trench design has always been based on bottom area.
.0901	70		Table XVI - Why range 0.001 not allowed? Use max. Contradicts DSE values, use half rule. Is agent expected to check this? Prescriptive nature conflicts somewhat? A how to use it. Reference information may be Appendix XXX		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree. The proposed mass loading use was confusing. Please refer to revised Rule .0402 for updated approach.
.0901	70		The organic loading chart is a bit confusing.		Steve Barry, AQWA, 10/2/2017	Agree. The proposed mass loading use was confusing. Please refer to revised Rule .0402 for updated approach.
.0901	70 to 71		Am I calculating this correctly? It looks like the upper end of DSE strength would almost double or triple drainfield size based on mass loading, so presumably HSW would more than double required drainfield size based on this? Is that the intent? Effectively, 0.4 LTAR soil would have to get LTAR of 0.2 or less for high strength effluent.		Connie Adams, Caldwell LHD, 10/31/2017	Agree. The proposed mass loading use was confusing. Please refer to revised Rule .0402 for updated approach.

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.0901	70	11	"The total trench length required for products approved under Section .1700 of this Subchapter shall be determined in accordance with the PIA approval." This comment is not necessary under the section of "General Design and Installation Criteria for Subsurface Dispersal Systems." Mentioning "PIA" products solely in the category of "General Design & Installations Criteria", puts products, not specifically mentioned, at a disadvantage when it comes to educating the industry professionals. Modifications to Conventional Septic Systems (as LDP and PPBPS are referred to in the .1900 rules), cannot be omitted from this section, if you are going to include Approved/Innovative products in this section.	If it is necessary for this comment to remain, add line (5) to say "The total trench length required for trench products approved under Section .0905 and .0904 shall be determined in accordance with rule .0905(c) and rule .0904(c)." The better option would be to strike the sentence in .0901(c)(4); as to not provide an unfair market advantage to products from the .1700 Section.	Logan Settle, T&J Panel, 10/30/2017	Agree with modifications.
.0901	70	19	How?? BOD or BOD5?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree. The proposed mass loading use was confusing. Please refer to revised Rule .0402 for updated approach.
.0901	70	21	Typo in title	"TABLE XVII. LTAR and mass loading rate for wastewater systems in saprolite. . . "	Connie Adams, Caldwell LHD, 10/31/2017	Agree. However, we have changed our approach to mass loading, so this will not be added to the title. See Rule .0402.
.0901	71	5	Suggest removing down slope side from this paragraph		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0901	71	5	.0901(d) states that "Wastewater system installation shall be in accordance with the following criteria:" followed by .0901(d)(12) which states "trench products approved under Section .1700 of this Subchapter shall be installed in accordance with their PIA approval." Mentioning "PIA" products solely in the category of "General Design & Installations Criteria", puts products not specifically mentioned at a disadvantage when it comes to educating the industry professionals. Modifications to Conventional Septic Systems (as LDP and PPBPS are referred to in the .1900 rules), cannot be omitted from this section, if you are going to include Approved/Innovative products in this section.	If it is necessary for this comment to remain, add line (13) to say "Trench products approved under Section .0905 shall be installed in accordance with .0905(d). Add line (14) to say "Trench products approved under Section .0904 shall be installed in accordance with .0904(e)." The better option would be to strike the sentence in .0901(d); as to not provide an unfair market advantage to products from the .1700 Section.	Logan Settle, T&J Panel, 10/30/2017	Agree with modifications
.0901	71	14 to 17	very consequential typo--please correct!! If 12" on downslope side, there will be less than 12" to unsuitable on the upslope side!	"(3) trenches shall be installed with 12 inches of naturally occurring suitable soil between the **upslope** side of the infiltrative surface and any unsuitable soil condition. If a site has six inches of Group I 15 soils, trenches shall be installed with 18 inches of naturally occurring suitable soil between the **upslope** side of the infiltrative surface and a soil wetness condition;. "	Connie Adams, Caldwell LHD, 10/31/2017	Agree with modifications
.0901	71	14, 16	12 inches or more, 18 inches or more		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Correct
.0901	71	15 to 17	"If a site has six inches of Group I soils, trenches shall be installed with 18" of naturally occurring suitable soil between the downslope side of the infiltrative surface and a SWC." Where does this six inches of Group I soil have to occur within the soil profile to require the 18" separation? Change to: If six inches or more of Group I soil occurs below the downslope side of the infiltrative surface and a soil wetness condition, a minimum 18 inches of naturally occurring suitable soil separation to wetness shall be maintained.		Len Gilstrap, Carteret LHD, 10/31/2017	Agree with modifications
.0901	71	17	Doesn't make technical point? Under trench bottom		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree. We have modified the language to address the comments received.
.0901	71	18	Where?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Don't know how much clearer we can make this statement.
.0901	71	19	Sometime more than 6" of final cover is desirable, and trenches can be deeper than 18".	"(5) final soil cover over the dispersal field shall be to a minimum depth of six inches after settling. . ."	Connie Adams, Caldwell LHD, 10/31/2017	Agree

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.0901	71	21	Downspouts, crawl space drains, etc, should be diverted as well		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0901	71	22	SDR35 or sch 40		Glenn Hines, 10/29/2017	Agree and Rule .0703 allows for this substitution.
.0901	71	25	"distribution box, ..." do you mean distribution device?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. We are referring to a distribution box in this instance.
.0901	71	28	Clarify what is meant by "undisturbed soil"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Undisturbed soil means naturally occuring soil. Do not need to further clarify. This is an accepted term that is used on a daily basis.
.0901	72	3	typo--replace effluent with more appropriate term.	"(9) serial and sequential distribution may be used when approved by the authorized agent. The stepdown or dropbox in an individual trench shall be constructed to allow full utilization of the upstream trench prior to . . ."	Connie Adams, Caldwell LHD, 10/31/2017	Agree
.0901	72	3	Serial and sequential distribution may be used by the authorized agent.	Should read "Serial and sequential may be used." or "approved by" used??	Cory Brantley, 10/2/2017	Actually reads "may be used when approved by authorized agent". We believe that addresses your comment.
.0901	72	6	THIS PROPOSAL IS UNNECESSARY, BURDENSOME, AND PROVIDES NO REAL EVIDENCE OF NON-COMPLIANCE. AGGREGATES PURCHASED BY WEIGHT MAY NOT BE DESTINED FOR A SINGLE JOBSITE, AND AGGREGATES FROM DIFFERENT QUARRIES MAY BE OF DIFFERENT SPACIFIC GRAVITIES.	ELIMINATE THIS PARAGRAPH.	Doug Lassiter, NCSTA, 10/24/2017	Agree
.0901	72	9	typo--this paragraph is about step downs, not drop boxes. Also, how do you propose for installer to "demonstrate" performance? Suggest dropping that language here and in (11). Setting construction standards to ensure performance is more effective.	(10) step-downs shall be constructed of two feet of undisturbed soil, bedding material, or concrete and the effluent shall be conveyed over the step-down through Schedule 40 PVC or other equivalent State-approved pipe. The installer shall demonstrate that the step-downs perform as designed	Connie Adams, Caldwell LHD, 10/31/2017	Agree
.0901	72	9	Replace "drop boxes" with "step-downs"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0901	72	10 to 13	How do you propose for installer to "demonstrate" that drop boxes perform as designed? Suggest dropping that language-- setting construction standards to ensure performance is more effective.		Connie Adams, Caldwell LHD, 10/31/2017	Disagree. To demonstrate that a drop box performs verify the elevations of the box and ensure that the box sits on undisturbed soil. This is the current practice for demonstration.
.0901	72	15	Insert "respective" in from of "PIA approval"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Current language is sufficient.
.0901	72	16	Delete (13)		ABCD Construction, 9/14/2017	Agree
.0901	72	16	Delete (13)		Andrew Daywalt, 9/25/2017	Agree
.0901	72	16	Delete (13)		Ben Hildreth, 9/25/2017	Agree
.0901	72	16	Delete (13)		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Agree
.0901	72	16	Delete (13)		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Agree
.0901	72	16	Delete (13)		Brian Beebe, 10/23/2017	Agree
.0901	72	16	Delete (13)		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Agree
.0901	72	16	Delete (13)		Cable Septic and Backhoe Service, 10/23/2017	Agree
.0901	72	16	Delete (13)		Charles Dodge, C&C Septic Services, 9/25/2017	Agree
.0901	72	16	Delete (13)		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Agree
.0901	72	16	Delete (13)		Charles Driggers, Driggers Septic Tank, 9/25/2017	Agree

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.0901	72	16	Delete (13)		Charlie Brice, 9/25/2017	Agree
.0901	72	16	Delete (13)		Chris Hedrick, 9/25/2017	Agree
.0901	72	16	Delete (13)		Chriscoe Bacchoe Service, 10/23/2017	Agree
.0901	72	16	Delete (13)		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Agree
.0901	72	16	Delete (13)		Daniel Newsome, D&D Organic Farming, 10/24/2017	Agree
.0901	72	16	Delete (13)		Danny Dennis, 10/23/2017	Agree
.0901	72	16	Delete (13)		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Agree
.0901	72	16	Delete (13)		David Murphy, DRM, 10/24/2017	Agree
.0901	72	16	Delete (13)		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Agree
.0901	72	16	Delete (13)		Donald Martin, 10/23/2017	Agree
.0901	72	16	THE ESTABLISHMENT OF VEGETATION AT A SITE SHOULD BE THE RESPONSIBILITY OF THE OWNER, NOT THE INSTALLER.		Doug Lassiter, NCSTA, 10/24/2017	Agree
.0901	72	16	This is not a responsibility of the installer, but the owner's. This subsection is under installation criteria.	Eliminate (13) and if necessary, place it under owner responsibility	Doug Lassiter, NCSTA, 9/20/2017	Agree
.0901	72	16	Delete (13)		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Agree
.0901	72	16	Delete (13)		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Agree
.0901	72	16	Delete (13)		Garland Walker, 10/23/2017	Agree
.0901	72	16	Delete (13)		Gerald Leonard, 10/23/2017	Agree
.0901	72	16	Delete (13)		Hank Hill Grading, 10/23/2017	Agree
.0901	72	16	Delete (13)		Harry Hatcher, 9/25/2017	Agree
.0901	72	16	In place of "wastewater system" would "dispersal area" be clearer?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0901	72	16	Delete (13)		Jeff Link, Rowan, LHD, 9/25/2017	Agree
.0901	72	16	Delete (13)		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Agree
.0901	72	16	Delete (13)		Jerry Pearce, 9/15/2017	Agree
.0901	72	16	Delete (13)		Johnny Strickland, 10/23/2017	Agree
.0901	72	16	Delete (13)		Kearns Pumping Service, 10/23/2017	Agree
.0901	72	16	Delete (13)		Keith Blackburn, B & C Concrete, 9/20/2017	Agree
.0901	72	16	Delete (13)		Kippy Blanks, 9/28/2017	Agree
.0901	72	16	Delete (13)		Larry Beam, 9/23/2017	Agree
.0901	72	16	Delete (13)		Lawrence Henning, 9/15/2017	Agree
.0901	72	16	Delete (13)		Lester Breedlove, 10/23/2017	Agree
.0901	72	16	Delete (13)		Mark Johnson, 10/23/2017	Agree
.0901	72	16	Delete (13)		Marty Maness, 11/23/2017	Agree
.0901	72	16	Delete (13)		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Agree
.0901	72	16	Delete (13)		Michael Barger, 9/25/2017	Agree
.0901	72	16	Delete (13)		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Agree
.0901	72	16	Delete (13)		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Agree

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.0901	72	16	Delete (13)		Parrish Homes and Pools,Inc, 10/23/2017	Agree
.0901	72	16	Delete (13)		Pat Rentz, VIP Inspection Services, 9/25/2017	Agree
.0901	72	16	Delete (13)		Perry's Grading & Septic Service, 9/14/2017	Agree
.0901	72	16	Delete (13)		Randy Lackey, Love Valley Septic, 9/25/2017	Agree
.0901	72	16	Delete (13)		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Agree
.0901	72	16	Delete (13)		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Agree
.0901	72	16	Delete (13)		Ronnie Burgin, 9/25/2017	Agree
.0901	72	16	Delete (13)		Russell C. Trodgon, 9/18/2017	Agree
.0901	72	16	Delete (13)		Russell Lineberry, 10/23/2017	Agree
.0901	72	16	Delete (13)		Sterlin Church, Church's Backhoe Service, 9/25/2017	Agree
.0901	72	16	Delete (13)		Steve Cannon, Rowan LHD, 9/25/2017	Agree
.0901	72	16	Delete (13)		Terry Maples, 10/23/2017	Agree
.0901	72	16	Delete (13)		TM Grading, Inc, 10/23/2017	Agree
.0901	72	16	Delete (13)		Tyler Jolley, 9/15/2017	Agree
.0901	72	16	Delete (13)		Valentina Oxendine, 10/23/2017	Agree
.0901	72	16	Delete (13)		Vince Scroggins, 9/14/2017	Agree
.0901	72	16	Delete (13)		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Agree
.0901	72	16	Delete (13)		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Agree
.0901	72	16	Delete (13)		Willilam Garrison, EcoClean Septic, 9/25/2017	Agree
.0902	72	25	“Sites classified as suitable to soil depth may utilize shallow placement of dispersal system.” Permeable, Porous Block Panel Systems have always been used hand in hand with conventional gravel systems. If you have the space and soil to install a conventional gravel system, you can also adequately install a PPBPS. It is important to remember that PPBPS are considered a “Modification to Conventional Septic Systems,” and are able to be used in any way that a conventional septic system can be used.	Add line “(e)” in section .0905, stating “Sites classified suitable as to soil depth may utilize shallow placement of dispersal system.”	Logan Settle, T&J Panel, 10/30/2017	Agree with modifications. Language has been added to Rule .0902(b) to specify that this applies to all trench products in rule or approval.
.0902	72	28 to 37	By basing trench length on equivalent trench width of 3' (prescribed in (c)) and then installing trenches of 2' actual width on 6' centers as allowed under (d) (2) and (d)(3), you can get a 33% reduction in area required for the drainfield. Is this the intention?	"(c) The LTAR shall be determined in accordance with Rule .0901 (b) of this Section. Actual trench width shall be used to determine trench length in accordance with Rule .0901 (c). . . "	Connie Adams, Caldwell LHD, 10/31/2017	Disagree. Not all trench spacing is based on actual trench width. Some products, such as LDP, are based on trench equivalencies.
.0902	72	30	.0902 conventional wastewater systems: conventional system includes a variety of dispersal options in addition to the standard gravel trench. This section of the rule is ambiguous concerning the spacing requirement (.0902(2) and .0902(3)) where products other than the standard, accepted gravel trench are used. Trench width should be defined as excavated trench		Bob Rubin, NCSU, 10/26/2017	Disagree. Not all trench spacing is based on actual trench width. Some products, such as LDP, are based on trench equivalencies.
.0902	72	33	Replace "one-fourth inch in ten feet" with "2.5 inch per 100 feet"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Either method is correct. Will leave the language that we have currently proposed in the draft.
.0902	73	3		Add aggregate size #57	Doug Lassiter, NCSTA, 10/2/2017	Disagree. The amount of fines in #57 is prohibitive for gravel systems.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0902	73	6	I support the application of a bill of lading requirement, similar to Innovative wastewater system approval IWWS-2002-03-R3, to help verify that an adequate quantity of aggregate has been placed in the construction of a conventional trench. Installers in some areas of North Carolina verbally report using between 8 and 12 tons of stone to construct 100 feet of 3-foot-long by 1-foot-high trench under current Rule .1955. The depth of these trenches is not being verified during inspection. This equates to a sizing reduction by eliminating available sidewall infiltrative area. Using the widely recognized conversion factor of 1.5 tons/cubic yard of crushed stone, 100 feet of rock trench should require approximately 16.7 tons of stone ([3'W x 1'H x 100' L x 1.5 tons/cy] / [27 cy/cf] = 16.7 tons of stone). Use of less stone than 15 to 16.7 tons/100 feet equates to height and volume storage reductions compared to the minimum requirements in Rule .1955 and represents a preventable violation of the rule.	No proposed change	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Disagree. Some installers may stockpile gravel and so the bill of lading would not accurately reflect the amount of gravel installed in the trenches. The State will continue to work with LHD to verify that the amount of gravel installed in trenches meets the minimum requirements by rule.
.0902	73	6	This is unnecessary and burdensome and proves nothing. This is another attempt by manufacturers of other dispersal products to add hurdles to the installer choosing to use rock and pipe. In fact, installers order natural aggregates by tonnage, and the tonnage is dependent on the specific gravity of the aggregate from the specific quarry. So the amount of square footage needed in the drainfields cannot be accurately related to tonnage.	Eliminate (5)	Doug Lassiter, NCSTA, 9/20/2017	Agree
.0902	73	6	Not practical, hasn't been needed in the past. If there is a problem, will need to be dealt with.	Remove this requirement	Len Gilstrap, Carteret LHD, 9/20/2017	Agree
.0902	73	6	This proposal is unnecessary and provides no real indication of the amount of aggregate actually used in the particular job. An installer may stockpile aggregate, and they will hardly go to the quarry and not get what is typical for the trench length. More than anything else, quarries in North Carolina may produce aggregate of different weights/square foot.	Eliminate (5)	Russ Ayers, Bennie Moore Septic Tank, 9/20/2017	Agree
.0902	73	6 to 8	Delete (5)		ABCD Construction, 9/14/2017	Agree
.0902	73	6 to 8	Delete (5)		Andrew Daywalt, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Ben Hildreth, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Brian Beebe, 10/23/2017	Agree
.0902	73	6 to 8	Delete (5)		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Agree
.0902	73	6 to 8	Delete (5)		Cable Septic and Backhoe Service, 10/23/2017	Agree
.0902	73	6 to 8	Delete (5)		Charles Dodge, C&C Septic Services, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Charles Driggers, Driggers Septic Tank, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Charlie Brice, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Chris Hedrick, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Chriscoe Bacchoe Service, 10/23/2017	Agree

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.0902	73	6 to 8	Delete (5)		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Agree
.0902	73	6 to 8	Delete (5)		Daniel Newsome, D&D Organic Farming, 10/24/2017	Agree
.0902	73	6 to 8	Delete (5)		Danny Dennis, 10/23/2017	Agree
.0902	73	6 to 8	Delete (5)		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Agree
.0902	73	6 to 8	Delete (5)		David Murphy, DRM, 10/24/2017	Agree
.0902	73	6 to 8	Delete (5)		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Donald Martin, 10/23/2017	Agree
.0902	73	6 to 8	Delete (5)		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Agree
.0902	73	6 to 8	Delete (5)		Garland Walker, 10/23/2017	Agree
.0902	73	6 to 8	Delete (5)		Gerald Leonard, 10/23/2017	Agree
.0902	73	6 to 8	Delete (5)		Hank Hill Grading, 10/23/2017	Agree
.0902	73	6 to 8	Delete (5)		Harry Hatcher, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Jeff Link, Rowan, LHD, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Jerry Pearce, 9/15/2017	Agree
.0902	73	6 to 8	Delete (5)		Johnny Strickland, 10/23/2017	Agree
.0902	73	6 to 8	Delete (5)		Kearns Pumping Service, 10/23/2017	Agree
.0902	73	6 to 8	Delete (5)		Keith Blackburn, B & C Concrete, 9/20/2017	Agree
.0902	73	6 to 8	Delete (5)		Kippy Blanks, 9/28/2017	Agree
.0902	73	6 to 8	Delete (5)		Larry Beam, 9/23/2017	Agree
.0902	73	6 to 8	Delete (5)		Lawrence Henning, 9/15/2017	Agree
.0902	73	6 to 8	bill of lading required on jobs with rock. Some installers stockpile rock and a bill of lading may not be available. It may also discourage them from using rock if this is required. Delete		Len Gilstrap, Carteret LHD, 10/31/2017	Agree
.0902	73	6 to 8	Delete (5)		Lester Breedlove, 10/23/2017	Agree
.0902	73	6 to 8	Delete (5)		Mark Johnson, 10/23/2017	Agree
.0902	73	6 to 8	Delete (5)		Marty Maness, 11/23/2017	Agree
.0902	73	6 to 8	Delete (5)		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Agree
.0902	73	6 to 8	Delete (5)		Michael Barger, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Parrish Homes and Pools,Inc, 10/23/2017	Agree
.0902	73	6 to 8	Delete (5)		Pat Rentz, VIP Inspection Services, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Perry's Grading & Septic Service, 9/14/2017	Agree
.0902	73	6 to 8	Delete (5)		Randy Lackey, Love Valley Septic, 9/25/2017	Agree

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.0902	73	6 to 8	Delete (5)		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Agree
.0902	73	6 to 8	Delete (5)		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Agree
.0902	73	6 to 8	Delete (5)		Ronnie Burgin, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Russell C. Trodgon, 9/18/2017	Agree
.0902	73	6 to 8	Delete (5)		Russell Lineberry, 10/23/2017	Agree
.0902	73	6 to 8	Delete (5)		Sterlin Church, Church's Backhoe Service, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Steve Cannon, Rowan LHD, 9/25/2017	Agree
.0902	73	6 to 8	Delete (5)		Terry Maples, 10/23/2017	Agree
.0902	73	6 to 8	Delete (5)		TM Grading, Inc, 10/23/2017	Agree
.0902	73	6 to 8	Delete (5)		Tyler Jolley, 9/15/2017	Agree
.0902	73	6 to 8	Delete (5)		Valentina Oxendine, 10/23/2017	Agree
.0902	73	6 to 8	Delete (5)		Vince Scroggins, 9/14/2017	Agree
.0902	73	6 to 8	Delete (5)		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Agree
.0902	73	6 to 8	Delete (5)		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Agree
.0902	73	6 to 8	Delete (5)		Willilam Garrison, EcoClean Septic, 9/25/2017	Agree
.0902	73	7	Installer use CI?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	This paragraph has been removed from the proposed rules.
.0902	73	9	Shallow systems need to be defined. Do you mean <18" trench depth with fill for cover? It used to mean <36" trench depth. May also need to define "shallow placement" in .0902 (a) (pg 72 line 26)	Suggest adding definition of "shallow system" to .0105: "Shallow system means a trench system installed with trench depths of less than 18" and which requires fill for cover to achieve minimum cover requirements" OR, be that explicit in this rule (and subsequent rules where applicable?)	Connie Adams, Caldwell LHD, 10/31/2017	Agree and have removed shallow.
.0902	73	9	Wake County has concerns regarding shallow systems. Conventional and shallow perhaps needs definitions.		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree and have removed shallow.
.0902	73	9 to 29	Are these two supposed to be under .0901? They apply to most systems, not just gravel. Especially (e) which is shallow trench depth with fill for cover.		Connie Adams, Caldwell LHD, 10/31/2017	No. These belong in this Rule. The rule has been clarified so that these options, shallow systems and dual alternating, are applied to all trench types.
.0902	73	17	Should alternating dual dispersal fields be defined?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. This terminology has been in use for years and is outlined in the rules. Does not need any further defining.
.0902	73	20	"at least 75%", max reduction?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0902	73	26 to 27	Remove this Subparagraph		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. A manufacturer may propose an additional reduction specific to their PIA approval.
.0902	73	28	Stop this sentence after "25 percent". Total reduction 25%, no double dip. Future PIA?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. A manufacturer may propose an additional reduction specific to their PIA approval.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0902	73	28	.0902(f)(7) “the maximum reduction in dispersal field area is 25 percent, unless a greater percentage is specifically identified in a PIA approval or this Subchapter.” There is some confusion around which products are allowed additional reductions in dispersal field area, when installed as dual alternating dispersal fields. The maximum reduction is stated here to be “25 percent”, however some 25% reduction products have been given a 35% and 35% reduction when being installed as dual alternating dispersal fields. It would be beneficial to see a consistent formula that results in a fair reduction, equivalent to the reduction already achieved by a system when installed singularly, with a traditional repair area.	Change .0902(f)(7) “the maximum reduction in dispersal field area is 25 percent for conventional gravel systems, the maximum reduction in dispersal field area is 35 percent for Chamber and Pipe systems, and the maximum reduction in dispersal field area is 60 percent for Panel Block Systems.	Logan Settle, T&J Panel, 10/30/2017	Disagree. A manufacturer of a specific product may always apply through the PIA process and propose an additional reduction for alternating dual dispersal fields. Each application shall be evaluated based on the information provided to support the application.
.0902	73	28	"Initial and repair dispersal fields utilizing an accepted product are sized at a minimum of 65 percent of the total area required for a conventional gravel wastewater system" Panel Block Systems receive a 50% reduction of the total area required for a conventional gravel wastewater system. When installed as alternating dual dispersal fields, Panel Block Systems should receive a greater reduction on the total area required than allotted by this rule. Conventional and 25% reduction systems aren't the only systems that can be utilized under this provision, thus this sentence needs to be amended or removed.	Suggestion: To include the total percentage of area required by 50% reduction Panel Systems installed in alternating dual dispersal fields as the minimum sizing required ("sized at a minimum of 45% of the total area required for a conventional gravel wastewater system"). 50% reduction + an additional 10% (from installing system and repair, as allowed per the rule) = 60% reduction on the total area required for a conventional gravel wastewater system. Or specify that system sizing reductions are increased 10% when installing system and repair for all systems. (Not just 25% alternatives)	Logan Settle, T&J Panel, 10/26/2017	Disagree. There is no basis for a parallel concession. This results from meeting the requirements of the PIA process to which PPBPS has not been subject.
.0903	73	35	Panel systems should be addressed in this subsection.		Logan Settle, T&J Panel, 10/26/2017	Disagree. Bed systems are areal dispersal vs trench dispersal. PPBPS is a trench dispersal product. Chambers were not initially approved for beds, but came back and got approval for beds going through Rule .1969. Chambers also have accepted approval and are considered equal to gravel. PPBPS has not yet been shown to be equal to gravel.
.0903	73	35	PPBPS’s have been used in conjunction with these subsections for many years, and with much success. PPBPS should be addressed in each of these subsections. It is important to remember that PPBPS are considered a “Modification to Conventional Septic Systems,” and are able to be used in any way that a conventional septic system can be used.	Add line in each section (perhaps beneath the line: “trench products approved under Section .1700 of this Subchapter shall be installed in accordance with PIA approval”), stating “trench products approved under Section .0905 of this section shall be installed in accordance with manufacturer’s specifications.”	Logan Settle, T&J Panel, 10/30/2017	We have never seen a PPBPS system installed in a bed system. Additionally, PPBPS are required to be installed not less than eight feet on center. Bed systems are installed with lines at three feet on center. It seems to us that this would not be possible to do.
.0903	74	1	bed system shall be limited to 720 gpc		Glenn Hines, 10/29/2017	Disagree. Conventional bed systems are limited to 600 gpd based on past North Carolina experience with bed systems. A manufacturer may always apply for a specific bed design with a design daily flow greater than 600 gpd through the PIA approval process.
.0903	74	1 to 3	Bed systems shall be limited to 600 gallons per day design daily flow. What is the basis for 600 gpd? The flow and linear footage requirements throughout the rules are random and appear to be arbitrary. Simplify the rules by establishing one standard.	Simplify the rules by deciding on a single GPD and linear footage limit requirement for all system-not something different for each system category. CH/RE: Change language or replace.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. The 600 gpd is based on North Carolina experience with bed systems. The Branch has heard your comments about about trying to consolidate the variety of design daily flows down to a minimum, and has worked to do that. Unfortunately, not all systems are equal and can be treated the same. Bed systems are one of those systems that are treated a little bit differently. The differences in trench width and length are based on different products specified in the rules and approvals. Just like not all sites are the same, not all products are the same and they should not be required to all be exactly the same trench width, etc.

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.0903	74	7	Add "other" in front of "design".		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. The current language is sufficient.
.0903	74	7	"design options, including APT systems". Define APT (RWTS, TS-I, TS-II, Reuse).		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. The use of bed systems with advanced pretreatment and the associated sizing and siting criteria is identified in Rule .1206. This rule provides the design criteria for DSE bed systems.
.0903	74	8 to 10	LTAR: Table XIII in Rule .0901(c) shall be used to determine the initial LTAR for a bed system. The number of square feet of bottom area required shall be increased by 50 percent over that required for a trench system. Remove the second sentence.	This rule increases the LTAR of the soil based on the configuration of the disposal field. An increase in LTAR should be based on the quality of effluent entering the soil. The disposal of secondary effluent should decide if the LTAR increases not the disposal field configuration. CH: Remove the increase by 50 percent language from the rule. If you are going to use LTAR to restrict sizing it must be based on the ability of the soil to accept wastewater not system configuration.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. This rule decreases the LTAR for a bed system by increasing the required area by 50%. The LTAR for a bed system can be increased by the use of advanced pretreatment in accordance with Rule 1206. Additionally, manufacturers can apply for an alternative bed design through the PIA approval process and request additional siting and sizing criteria.
.0903	74	9	why 50 percent?		Glenn Hines, 10/29/2017	The 50% increase in infiltrative surface area is based on the loss of trench side wall area. In trenches, the side wall area provides additional infiltrative surface area and a greater surface area for oxygen diffusion into the trenches. By increasing the infiltrative surface area, we are trying to add back the lost side wall area.
.0903	74	11	The bottom of the bed shall be excavated level, plus or minus one half inch, in all directions. Remove or modify language.	Bed technologies have a history of functioning properly using a different installation standard. These standards are obsolete. CH: Remove these standards from the rule.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. The bottom of the bed must be level or the effluent will drain to the lowest point in the bed system and eventually surface. If the bed is not installed level, there is nothing to stop the effluent from continuously draining to the lowest point. This will create a wet spot, which will eventually become a malfunction that must be repaired.
.0903	74	13	Laterals shall be at least one and a half feet from the side of the bed. Remove	Bed technologies have a history of functioning properly using a different installation standard. These standards are obsolete. CH: Remove these standards from the rule.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. The current design criteria has worked in North Carolina for a number of years and is based on the standard design for a sand filter. Alternative design criteria can always be approved through the PIA approval process. If there are specific design criteria you would like to propose, we would be happy to review that criteria.
.0903	74	14	Laterals shall be on three foot centers. Remove	Bed technologies have a history of functioning properly using a different installation standard. These standards are obsolete. CH: Remove these standards from the rule.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. The current design criteria has worked in North Carolina for a number of years and is based on the standard design for a sand filter. Alternative design criteria can always be approved through the PIA approval process. If there are specific design criteria you would like to propose, we would be happy to review that criteria.
.0903	74	14	(d)(2) – "laterals shall be one and on-half feet from the side of the bed". Current rules states "nitrification lines shall be at least 18" from the side of the bed…" Then .0903(3) states "laterals shall be placed on a maximum of three-foot centers". This sounds like it would mean that the laterals could be unequally spaced or less than 3' on centers within the bed. Would this rule allow for bed widths that are not multiples of 3? Such as 10' wide beds? Keep the spacing as designated in current rules "at least 18" from side of bed and on 3' centers".		Len Gilstrap, Carteret LHD, 10/31/2017	Agree
.0903	74	17, 21	Is it required to be installed or used in accordance with PIA approval?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Installed

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.0903	74	19 to 20	new		Glenn Hines, 10/29/2017	Agree. This requirement has been added to eliminate fines from washing into the gravel/media in the bed system, which can cause premature clogging of the bed system.
.0904	74	28	THE TRENCH SPACING FOR LDP IS SET HERE AT A MINIMUM OF 6 FEET. THIS WOULD ASSUME THAT THE TRENCH IS EXCAVATED IS A MECHANICAL DEVICE AND NEEDS MORE SPACING FOR DIGGING AND MATERIAL. THE USE OF LDP, ESPECIALLY IN THE MOUNTAINS, IS MANY TIMES DUG BY HAND AND WITHOUT THE COMPACTION AND NEED FOR THE ADDED SPACE, SHOULD BE ABLE TO REDUCE THE SPACING TO 5 FEET WHEN HAND DUG. ADDITIONAL MODIFICATIONS COULD BE APPLIED FOR SITES WITH STEEP SLOPES.	CONSIDER ADJUSTING TRENCH SPACING TO ALLOW FOR NON-MECHANICAL EXCAVATION.	Doug Lassiter, NCSTA, 10/24/2017	Agree with modifications. Upon consultation with installers who are very familiar with LDP, the five foot on center would be a good option, but not used very often. The five foot on center would give flexibility going around trees. The hand-dug requirement is not reasonable. Because contours are not always uniformly spaced, you could have part of the system with trenches five feet apart and other sections of the same line seven feet apart. This would make the hand digging clause impossible, so we are not going to require it for five feet on center.
.0904	74	28	Panel systems should be addressed in this subsection.		Logan Settle, T&J Panel, 10/26/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. PPBPS is not the same as LDP system.
.0904	74	30	Remove "encased in a nylon and polyester blend filter wrap that are"		Houston Crumpter, Crumpler Plastic Pipe, Inc, 10/30/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	74	30	Remove "encased in a nylon and polyester blend filter wrap that are"		Steve Steinbeck, 10/31/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	74	31	LDP cannot be used with APT?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	LDP can be used with advanced pretreatment.
.0904	74	35	"LTAR shall not exceed 1.0 gpd/ft^2"		Houston Crumpter, Crumpler Plastic Pipe, Inc, 10/30/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	74	35	"LTAR shall not exceed 1.0 gpd/ft^2"		Steve Steinbeck, 10/31/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	74	37	"used for 10-inch pipe, and an equivalent of three feet shall be used for 12-inch pipe"		Houston Crumpter, Crumpler Plastic Pipe, Inc, 10/30/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	74	37	"used for 10-inch pipe, and an equivalent of three feet shall be used for 12-inch pipe"		Steve Steinbeck, 10/31/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0904	75	1	"(d) LDP tubing shall be backfilled with concrete sand to the spring line or horizontal midpoint or enclosed in filter wrap, corrugated tubing, perforations, and fittings"		Houston Crumpter, Crumpler Plastic Pipe, Inc, 10/30/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	75	1	Replace tubing in this paragraph with LDP, pipe, or LDP pipe		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0904	75	1	"(d) LDP tubing shall be backfilled with concrete sand to the spring line or horizontal midpoint or enclosed in filter wrap, corrugated tubing, perforations, and fittings"		Steve Steinbeck, 10/31/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	75	9	"(4) when the LDP is not installed in concrete sand, the corrugated tubing"		Houston Crumpter, Crumpler Plastic Pipe, Inc, 10/30/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	75	9	"(4) when the LDP is not installed in concrete sand, the corrugated tubing"		Steve Steinbeck, 10/31/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	75	10	"(5) filter wrap, when used, shall"		Houston Crumpter, Crumpler Plastic Pipe, Inc, 10/30/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	75	10	"(5) filter wrap, when used, shall"		Steve Steinbeck, 10/31/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	75	16	Add "or per manufacturer's recommendation" to table		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	75	18	"LDP….trenches shall be 12" wide. No more no less? It is very time consuming to install a 12" OD pipe in a 12" wide trench with protruding roots.		Chad Gambill, Caldwell County Health Dept, 10/31/2017	Agree
.0904	75	18	"(e) LDP systems installed in Soil Group I soils shall be backfilled with concrete sand in compliance with ASTM C33 to the midpoint or spring line of the LDP system and in other soils where the LDP system is not fabric wrapped."		Houston Crumpter, Crumpler Plastic Pipe, Inc, 10/30/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	75	18	"(f) LDP system installation shall be in accordance with Rule .0901(d) of this Section, the manufacturer's specifications, and the following:"		Houston Crumpter, Crumpler Plastic Pipe, Inc, 10/30/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	75	18	"(e) LDP systems installed in Soil Group I soils shall be backfilled with concrete sand in compliance with ASTM C33 to the midpoint or spring line of the LDP system and in other soils where the LDP system is not fabric wrapped."		Steve Steinbeck, 10/31/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0904	75	18	"(f) LDP system installation shall be in accordance with Rule .0901(d) of this Section, the manufacturer's specifications, and the following:"		Steve Steinbeck, 10/31/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	75	19	Have there been issues with 14" and 16" trenches? I will get a lot of push back from installers on the 12" trench width.		Connie Adams, Caldwell LHD, 10/31/2017	Agree
.0904	75	19	"(1) trenches shall be excavated to a minimum width of the outside diameter of the LDP system;"		Houston Crumpter, Crumpler Plastic Pipe, Inc, 10/30/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	75	19	Trenches shall be a minimum of 12 inches wide and a maximum of 18 inches wide. On sites with a lot of roots the fabric will be torn during installation, the outside diameter of 10 inch LDP is 12 inches.		Joe Lynn, 10/31/2017	Agree with modifications
.0904	75	19	"(1) trenches shall be excavated to a minimum width of the outside diameter of the LDP system;"		Steve Steinbeck, 10/31/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	75	20	"(with a maximum fall of one inche in 100 feet) and the trench bottom shaped to match the circumfrence of the LDP system"		Houston Crumpter, Crumpler Plastic Pipe, Inc, 10/30/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	75	20	"(with a maximum fall of one inche in 100 feet) and the trench bottom shaped to match the circumfrence of the LDP system"		Steve Steinbeck, 10/31/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	75	21	This is a big change--former rule was to use sand when soil group is IV. What is prompting this change?		Connie Adams, Caldwell LHD, 10/31/2017	Agree and have added Group I soils back to backfill material.
.0904	75	21	"(3) the LDP system shall be backfilled with native soil that is free of trash or debris"		Houston Crumpter, Crumpler Plastic Pipe, Inc, 10/30/2017	Disagree. Native soil may be Group IV and unsuitable for backfill. This language is also consistent with other rules.
.0904	75	21	"(3) the LDP system shall be backfilled with native soil that is free of trash or debris"		Steve Steinbeck, 10/31/2017	Disagree. Native soil may be Group IV and unsuitable for backfill. This language is also consistent with other rules.
.0904	75	23	What????		Connie Adams, Caldwell LHD, 10/31/2017	Agree. Clarification added.
.0904	75	25	.0904 large diameter pipe: Line spacing in the previous section defined appears to be based on the excavated trench. Where LDP installations are utilized on steeply sloping sites in the mountains, the spacing could be adjusted downward based on excavated trench width to provide regulatory agency personnel and installers greater flexibility in the installation. Specifically the 8 inch and 10 inch LDP statement could read: "the 8 inch and 10 inch LDP shall be installed on six foot spacing except when the lines are installed on sloping sites and the trenches are excavated and backfilled by hand and no mechanical equipment is used during the excavation process., then spacing required is a minimum of 5 feet." This proposed wording would provide flexibility for challenging sites.		Bob Rubin, NCSU, 10/26/2017	Agree with modifications. Upon consultation with installers who are very familiar with LDP, the five foot on center would be a good option, but not used very often. The five foot on center would give flexibility going around trees. The hand-dug requirement is not reasonable. Because contours are not always uniformly spaced, you could have part of the system with trenches five feet apart and other sections of the same line seven feet apart. This would make the hand digging clause impossible, so we are not going to require it for five feet on center.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0904	75	25	"six feet except when dispersal trenches are excavated by hand and without mechanical equipment when the minimum spacing shall be five feet on centers."		Houston Crumpter, Crumpler Plastic Pipe, Inc, 10/30/2017	Agree with modifications. Upon consultation with installers who are very familiar with LDP, the five foot on center would be a good option, but not used very often. The five foot on center would give flexibility going around trees. The hand-dug requirement is not reasonable. Because contours are not always uniformly spaced, you could have part of the system with trenches five feet apart and other sections of the same line seven feet apart. This would make the hand digging clause impossible, so we are not going to require it for five feet on center.
.0904	75	25	Add new (6) - Any additional/stringent requirement by manufacturer		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. The LDP rule is based on generic LDP design criteria that were developed from research and experience in North Carolina. Manufacturers may always apply to the State for a PIA approval based on alternate design criteria.
.0904	75	25	"six feet except when dispersal trenches are excavated by hand and without mechanical equipment when the minimum spacing shall be five feet on centers."		Steve Steinbeck, 10/31/2017	Agree with modifications. Upon consultation with installers who are very familiar with LDP, the five foot on center would be a good option, but not used very often. The five foot on center would give flexibility going around trees. The hand-dug requirement is not reasonable. Because contours are not always uniformly spaced, you could have part of the system with trenches five feet apart and other sections of the same line seven feet apart. This would make the hand digging clause impossible, so we are not going to require it for five feet on center.
.0905	76	3	NCAC 18A .1956(3)(a)(ii) has required pressure dosing prefabricated permeable block panel systems where the design flow is more than 480 gallons per day. Proposed 15A NCAC 18E .0905 lifts this requirement seemingly without scientific justification.	Restore the requirement from current-day NCAC 18A .1956(3)(a)(ii) for pressure dosing prefabricated permeable block panel systems where the design flow is more than 480 gallons per day or share the scientific justification (i.e., provisional study or equivalent) with industry stakeholders.	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Agree with modifications
.0905	76	3	Panel systems should be addressed in this subsection.		Logan Settle, T&J Panel, 10/26/2017	Agree
.0905	76	13	elimate entirely		Glenn Hines, 10/29/2017	Disagree. This criteria was based on the original information submitted for the Rule. To our knowledge, there has been no problem with this spacing to require a change.
.0906	76	26	Panel systems should be addressed in this subsection.		Logan Settle, T&J Panel, 10/26/2017	Agree
.0906	76	26	PPBPS's have been used in conjunction with these subsections for many years, and with much success. PPBPS should be addressed in each of these subsections. It is important to remember that PPBPS are considered a "Modification to Conventional Septic Systems," and are able to be used in any way that a conventional septic system can be used.	Add line in each section (perhaps beneath the line: "trench products approved under Section .1700 of this Subchapter shall be installed in accordance with PIA approval"), stating "trench products approved under Section .0905 of this section shall be installed in accordance with manufacturer's specifications."	Logan Settle, T&J Panel, 10/30/2017	Agree, but there is no Paragraph in this part of the rule for trench products approved under Section .1700.
.0906	76	29	Why 1,500 gpd?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	The design flow was increased to 1,500 gpd so that there would be fewer separate design flows scattered throughout the rules. The idea (in response to a comment received) was to try and create a uniform design daily flow whenever possible to help streamline the permitting process.
.0906	76	29	Sand lined trenches are limited to 1,000 gallons per day design daily flow.	Simplify the rules by deciding on a single GPD and linear footage limit requirement for all systems-not something different for each system category. CH/RE: Change language or replace.	Lee Rashkin, Presby Environmental, 10/31/2017	Agree

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0906	77	2	"...soil surface..."	"...soil surface unless receiving effluent from an approved TS-II treatment system..." Added protection for the underlying aquifer is offered by nutrient and fecal reduction.	Joe Soulia, Orenco Systems, 10/31/2017	Disagree. Use of advanced pretreatment with sand lined trenches is addressed in Rule .1205. This rule addresses the use of sand lined trenches with DSE. Additionally, this is the current criteria in the rules and we have not had any issues with this standard.
.0906	77	2	"...soil surface..."	"...soil surface unless receiving effluent from an approved TS-II treatment system..." Added protection for the underlying aquifer is offered by nutrient and fecal reduction.	Steve Barry, AQWA, 10/31/2017	Disagree. Use of advanced pretreatment with sand lined trenches is addressed in Rule .1205. This rule addresses the use of sand lined trenches with DSE. Additionally, this is the current criteria in the rules and we have not had any issues with this standard.
.0906	77	3	The 18 inch separation requirement may be reduced to 12 inches when pressure dispersal is used. This rule needs to be changed. Pressure distribution has nothing to do with the quality of effluent and should consequently have nothing to do with setbacks or separation distances.	Separation distance breaks should be based more soil texture and structure and on the quality of effluent entering the ground not the method of disposal. CH/RE: remove reference to pressure dispersal and replace with secondary treatment effluent quality standards.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. Rule .1205 specifically addresses the use of advanced pretreatment with sand lined trenches. Pressure dispersal can also be used, and has been used, to reduce the vertical separation in certain situations. Pressure dispersal and advanced pretreatment together get the greatest siting and sizing modifications.
.0906	77	3 to 6	(b) (6) Much improved and clearer!		Len Gilstrap, Carteret LHD, 10/31/2017	Thank you
.0906	77	31	This office is OPPOSED to the increased LTAR for these systems. For almost 30 years this district has been installing Sand Lined Trench systems with the LTAR based on the most limiting layer (typically 0.2 to 0.4 LTAR) of soil and NOT the receiving sands. The MAJOR CONCERN that we anticipate is the increased loading rate, up to a 0.6, based on the receiving sand, will allow for drainfields to become much smaller and potentialy fail prematurely due to not having enough square footage/linear footage. This may then be interpreted as a Sand Lined Trench system failure and give these systems a black eye when in fact the failure may be due to the change in rule and not the type of system to begin with. As a proposed compromise if the client/applicant wishes to have the LTAR increased above the most limiting factor of naturally occurring soil assigned by the LHD (what has been done for the past 30 years) then place this LTAR increase in the section as a requirement for a special site evaluation (section f, beginning with line 3 of page 78) and not as a part of the basic rule.		David Swinney, ARHS, 10/31/2017	Agree and we have returned this rule to its original language.
.0906	77	31	TABLE XV. LTAR for sand line trench systems based on soil group and texture class. Add a category for Advanced treatment products	This table increases the LTAR of the soil based on the configuration of the disposal field. An increase in LTAR should be based on soil texture and the quality of effluent entering the soil. The quality of effluent in relation to LTAR should be given consideration like the disposal field configuration. AD: add a LTAR category for NSF -40 secondary treatment products.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. Rule .1205 specifically addresses the use of advanced pretreatment with sand lined trenches. This includes the ability to increase the LTAR based on advanced pretreatment.
.0906	78	6	design flow is greater than 600 gallons per day; or	Simplify the rules by deciding on a single GPD and linear footage limit requirement for all systems-not something different for each system category. CH/RE: Change language or replace	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. While we have tried to consolidate the variety of design flows and line lengths for when specific items are required, this requirement came about as part of the compromise when this rule was originally drafted. The areas of the State that use these systems most frequently did not have an issue with this number so we are leaving it at it currently is.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0906	78	14 to 18	Utilizing drip dispersal as a fluid handling system in sand lined trenches is an excellent application providing flow monitoring, equal distribution small dose volume average / peak flow time dosing with flow equalization, 115 micron filtration, and automatic dispersal network maintainance. The technology may accommodate uneven trench lengths as long as within an individual absorption are system design, assuming all trenches are the same width, there is the same number of runs in all trenches. I suggest allowing for 3 – 4 tubing runs in trenches 2 – 3' wide to allow for designs where tubing lat- erals may supply and return from the same size of the system.		Tom Ashton, American Manufacturing Company, 10/31/2017	Agree
.0906	78	21	are installed shall be no deeper than 24 inches below finished grade.	This rule restricts system depth on all sites. Some Piedmont soils improve with depth. CH: Change language or replace/Look at grammar.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. This rule has been modified to allow for deep systems that can be installed in the Piedmont. When the sand lined trench system was added to the rules, the wording eliminated the use of deep systems in the Piedmont.
.0906	78	24 to 28	In my experience, sand specifications are expressed as an effective diameter, a uniformity coefficient range, and a restriction on percent of fines passing through a 200 mesh screen. Typically ASTM C-33 concrete sand may be suitable for single pass application.		Tom Ashton, American Manufacturing Company, 10/31/2017	We have modified to language to be consistent with laboratory methods.
.0906	78	29	Pressure distribution shall be used when the total dispersal field line length exceeds 600 linear feet in a single system. Which rule applies?	Broaden the rule language to incorporate other methods of disposal. CH: remove the "pressure dispersal" reference and open the regulations to other methods of wastewater distribution. The language used should allow for other options beside just pressure dispersal. Simplify the rules by deciding on a single GPD and linear footage limit requirement for all system-not something different for each category.	Lee Rashkin, Presby Environmental, 10/31/2017	Agree with modifications. We have adjusted this line length to match the other requirement in the rules.
.0906	78	29 to 30	Pressure dosed gravity systems are required for field length exceeding 600 linear footage. What is the SCIENTIFIC reasoning behind this? Page 92, lines 10-11 only requires a pump if total lateral length exceeds 750 linear footage. If NO SCIENTIFIC reasoning can be given for this requiring a pump with 600 ft. of Sand Lined Trench then this office SUGGEST that both the rules on page 78 and 92 be made to a UNIFORM STANDARD. It may appear that this requirement of a pump with a 600 ft. Sand Lined Trench drainfield comes across as a PENALTY for using a Sand Lined Trench system, when other systems can have as much as 750 ft. before requiring a pump.		David Swinney, ARHS, 10/31/2017	Agree
.0906	78	31	Pressure dispersal shall be used when the total dispersal field line length exceeds 1,200 linear feet in a single system.	Broaden the rule language to incorporate other methods of disposal. CH: remove the "pressure dispersal" reference and open the regulations to other methods of wastewater distribution. The language used should allow for other options beside just pressure dispersal. Simplify the rules by deciding on a single GPD and linear footage limit requirement for all system-not something different for each category.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. While we have tried to consolidate the variety of design flows and line lengths for when specific items are required, this requirement came about as part of the compromise when this rule was originally drafted. The areas of the State that use these systems most frequently did not have an issue with this number so we are leaving it at it currently is.
.0907	79	15	PPBPS's have been used in conjunction with these subsections for many years, and with much success. PPBPS should be addressed in each of these subsections. It is important to remember that PPBPS are considered a "Modification to Conventional Septic Systems," and are able to be used in any way that a conventional septic system can be used.	Add line in each section (perhaps beneath the line: "trench products approved under Section .1700 of this Subchapter shall be installed in accordance with PIA approval"), stating "trench products approved under Section .0905 of this section shall be installed in accordance with manufacturer's specifications."	Logan Settle, T&J Panel, 10/30/2017	Can be used based on the manufacturer's specifications. LPP is used with PPBPS when the lines are 70 feet long or greater. This rule does not prohibit the use of LPP with PPBPS. It just provides the design for the LPP system.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0907	79	16	Wake County uses 4 to 7 feet of pressure head for LPP		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree. And Wake County has local rules.
.0907	79	16	I don't know which came first: the 3-foot elevation difference limit in the Rules, or the 3-foot elevation difference limit in the 1982 Sea Grant publication that has served as the basic guidance for LPP designers for 35 years. The Sea Grant pub doesn't include a bibliography or other background for its statements of "what is best". It states the desirability of pressure heads from 2 to 4 feet, because "higher pressures cause local scouring", but then its 3' range allows heads of up to 5'. Wake County's local rules have long allowed heads up to 7'. In my opinion, the advent of holes pointed up inside sleeves has eliminated potential for scouring. So… why impose this limit in elevation change across a single subfield? On steeper slopes, it requires multiple valves for adjusting pressure head. Even in the Piedmont, let alone the mountains, it can lead to subfields with only one or two laterals. I can think of two drawbacks to a greater range. One, already observed in Wake, is the problem of measuring/observing head in a 7+' standpipe on a bottom lateral. They tend to fall over under their own weight. However, few regulators and fewer operators set standpipes up on every lateral unless they're doing some serious troubleshooting – a sadly rare occurrence. The other drawback is a possible need to increase the diameter of the manifold relative to the laterals to accommodate an increased number of connections, but to some extent that cost is offset by the need for fewer valves.		Kathy Morris, Agri-Waste Technology, Inc, 10/26/2017	Disagree. We want to maintain as much scour velocity in the orifices as possible. Pressure can drop quickly in an LPP system, and the system can suddenly be operating at less than two feet of pressure head.
.0907	79	16	So – I think some kind of range limit might be appropriate, mainly to make it easier to achieve a gradual taper in flow rate down a slope with step-ups at tops of successive subfields, but I think the range should be increased to at least 5'. The proposed increase in minimum pressure head from 2' to 3', if nothing else, is going to confuse a high percentage of operators. Thousands of existing LPP's were designed at 2', and operators have been taught for decades that in the absence of a set of plans, assume 2' (except in Wake). And a regulatorily-supported increase in minimum design head is going to encourage that subset of operators who believe in increasing the head on an existing system to more closely approach design PDR over actually troubleshooting a system. I think it's reasonable to start with a higher head on a flatter site, but I see no advantage to starting at a higher head on any significant slope.		Kathy Morris, Agri-Waste Technology, Inc, 10/26/2017	Disagree. We want to maintain as much scour velocity in the orifices as possible. Pressure can drop quickly in an LPP system, and the system can suddenly be operating at less than two feet of pressure head.
.0907	79	16	(a) glad to see minimum pressure head at 3 feet! Great improvement.		Len Gilstrap, Carteret LHD, 10/31/2017	Thank you
.0907	79	21 to 24	This portion is apparently the traditional language. PAGE 81 Lines 1- 2 (e)(4) This criteria appears to provide for LPP with as little as 21 – 23" total soil depth as stated (I think) by S. Berkowitz at this years NCSU conference. Refering to pages 98, Table XXV and table XXVI…how / or does the above effect the values for LPP? Drip tubing placed in standard gravel trenches, within gravity lines should be considered as an appro- priate fluid handling system meeting LPP criteria.		Tom Ashton, American Manufacturing Company, 10/31/2017	Agree. Language has been added to allow this option.
.0907	79	24	Table XX and XXI?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Mass loading has been removed.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0907	79	26	Remove range from table. Source?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Mass loading has been removed.
.0907	80	4	Source for BOD and TSS?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Mass loading has been removed.
.0907	80	9	Total trench length is calculated based on a 5' minimum trench spacing, but if for some reason a 2'-wide trench is desired, the required spacing becomes 6' instead of 5'. This means that on space-limited sites, a 2'-wide trench might not be possible if the trench length was calculated using 5' spacing.		Kathy Morris, Agri-Waste Technology, Inc, 10/26/2017	Agree. The designer can always propose using a one foot wide trench.
.0907	80	21	Remove "small diameter pressure rated Schedule 40 PVC laterals placed in gravel or other approved media filled" and replace with 1.25 inch Sch 40 PVC or stronger		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. We have no basis for limiting the minimum diameter to 1.25 inches.
.0907	80	22	(e)(1) – "small diameter pressure rated Schedule 40 PVC" – size range of pipe is no longer specified and opens up designs to a wide range of options. This can be a problem when a designer unfamiliar with LPP's doesn't have guidelines. Add "1" – 2" diameter".		Len Gilstrap, Carteret LHD, 10/31/2017	Agree
.0907	80	24	Total trench length is calculated based on a 5' minimum trench spacing, but if for some reason a 2'-wide trench is desired, the required spacing becomes 6' instead of 5'. This means that on space-limited sites, a 2'-wide trench might not be possible if the trench length was calculated using 5' spacing.		Kathy Morris, Agri-Waste Technology, Inc, 10/26/2017	Agree. The designer can always propose using a one foot wide trench.
.0907	80	24, 26	"one to two feet" in line 24 conflicts with "five feet on centers" in line 26		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. The two statements do not conflict with each other. One specifies a minimum of a five foot trench spacing and the other statement specifies that in place of a five foot trench spacing, three times the trench width can be used (but not be less than five feet).
.0907	80 to 81	13, 34, 1	The geometric and pipe shielding requirements applied to a gravel LPP system are not applicable to some PIA systems and differentiation needs to be added so LHDs understand that PIA systems do not need to adhere to these configuration specifications.	Proposed change: (e) LPP system design and installation shall be in accordance with Rule .0901(d) of this Section and the following, unless otherwise allowed in a PIA approval:	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Agree
.0907	81		THE LANGUAGE IS FAIRLY PRESCRIPTIVE AND SHOULD BE EXPANDED TO ALLOW FOR OTHER TECHNOLOGIES AND COMPONENT CONFIGURATIONS (LIKE ORIFICE SHIELDING DEVICES).	CONSIDER ALLOWING "OTHER DESIGNS SHALL BE CONSIDERED UPON DEMONSTRATION."	Doug Lassiter, NCSTA, 10/24/2017	Agree with modifications
.0907	81	1	What is approved gravel? #5 ASTM D448		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0907	81	1	In .1957, this was 5", going back to the days when we were putting LPP laterals in 4-6" wide ditch- witch trenches. As trenches have gotten wider, available storage below the pipe has increased. Advent of sleeved laterals made it impossible to cover a 4" sleeve placed 5" above the trench bottom with 8" of gravel, and increasing the under-pipe to 6" just makes it worse. So – this appears to be a pointless rule mod. Although "other approved media" is mentioned, if one applies either 5" or 6" under-pipe requirements it appears to exclude polystyrene aggregate as currently available with a built-in sleeve centered in a bundle. In a 12" bundle there's only 4" below the sleeve. And of course, any bundle diameter greater than 8", regardless of where the sleeve is, means either a greater trench depth to accommodate thicker media (which spoils LPP's applicability in 24"-deep soils); or the need to import a fill cover (which wouldn't be appropriate on much of a slope).		Kathy Morris, Agri-Waste Technology, Inc, 10/26/2017	Agree and we have made the changes back to five inches of separation and nine inches of gravel.
.0907	81	4	The only generally-available reference material that I know of for this is the graph in Steven Berkowitz' 1986 paper. I've gone through the calculations on a few projects and have found that the graph is somewhat conservative. Here is as good a place as any to suggest that such widely-used reference materials be updated (if they haven't already) and put on the branch website.		Kathy Morris, Agri-Waste Technology, Inc, 10/26/2017	Understand comment and will take this under consideration.
.0907	81	4 and 5	Page 81 lines 4 and 5 state "the maximum lateral length shall yield no more than a 10 percent difference in discharge rate between the first and last orifice along the lateral". No matter how precise you are with your calculations on pump size, hole size etc. This 10% cannot be maintained if even just some of the discharge holes become clogged by debris from the pump tank. This can only be prevented with filtration at the discharge of the system. We have seen a code change recently in another health department code that states "Pump discharge filters are required where the distribution orifice size is ¼ inch diameter or smaller. Maximum pump discharge filter opening/screening size shall not exceed the maximum orifice size in the distribution network."		Gary Koteskey, Sim/Tech Filter, Inc, 10/31/2017	Disagree. On what basis did the "other code" render their decision to require a pump filter? Monitoring data that captures the difference in discharge rate across laterals fed by a single manifold? If such data is available we welcome the opportunity to review it. We currently have no basis on which to require these filters under most operating conditions. Also, we require operators on these systems and they are tasked with flushing lines regularly to remove solids and clear orifices.
.0907	81	6	When is a PE required		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	PE is required in accordance with Rule .0303.
.0907	81	7	Max 75 length per side		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Laterals can be longer than 75 feet and still have uniform distribution.
.0907	81	10 to 14	Page 81 lines 10 through 14 talk about protecting orifices with piping, tubing or orifice shields. It would be our concern in systems with discharge holes pointed down that when using pipe or tubing to sleeve the laterals, the discharge holes could be blocked by the pipe or tubing. If holes are pointed down there should either be a method of centering the laterals in the sleeve or only using orifice shields in this circumstance. Another concern is the crushing of the corrugated pipe during backfill. In traffic areas the pipe requires a foot of backfill and, while the field is not a traffic area after it is installed, it does tend to get traffic from the very machine that is doing the backfilling which has caused many instances of crushed pipe.		Gary Koteskey, Sim/Tech Filter, Inc, 10/31/2017	Agree. Orifice shields are already allowed to be used.
.0907	81	11	This appears to have the effect of requiring orifice shields and gravel if one wishes to place LPP trenches in minimum-depth soil, because 4" sleeves stick up too far about the minimum 8" media depth, and round bundles with center sleeves can't meet the under-pipe requirement. Is this the intention?		Kathy Morris, Agri-Waste Technology, Inc, 10/26/2017	Yes and no. Other designs can be proposed for use on a site-specific basis. Addressed the issue related to pipe height and sticking up from the ground with response to previous comment.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0907	81	16	I don't know which came first: the 3-foot elevation difference limit in the Rules, or the 3-foot elevation difference limit in the 1982 Sea Grant publication that has served as the basic guidance for LPP designers for 35 years. The Sea Grant pub doesn't include a bibliography or other background for its statements of "what is best". It states the desirability of pressure heads from 2 to 4 feet, because "higher pressures cause local scouring", but then its 3' range allows heads of up to 5'. Wake County's local rules have long allowed heads up to 7'. In my opinion, the advent of holes pointed up inside sleeves has eliminated potential for scouring. So… why impose this limit in elevation change across a single subfield? On steeper slopes, it requires multiple valves for adjusting pressure head. Even in the Piedmont, let alone the mountains, it can lead to subfields with only one or two laterals. I can think of two drawbacks to a greater range. One, already observed in Wake, is the problem of measuring/observing head in a 7+' standpipe on a bottom lateral. They tend to fall over under their own weight. However, few regulators and fewer operators set standpipes up on every lateral unless they're doing some serious troubleshooting – a sadly rare occurrence. The other drawback is a possible need to increase the diameter of the manifold relative to the laterals to accommodate an increased number of connections, but to some extent that cost is offset by the need for fewer valves.		Kathy Morris, Agri-Waste Technology, Inc, 10/26/2017	Disagree. We want to maintain as much scour velocity in the orifices as possible. Pressure can drop quickly in an LPP system, and the system can suddenly be operating at less than two feet of pressure head.
.0907	81	16	So – I think some kind of range limit might be appropriate, mainly to make it easier to achieve a gradual taper in flow rate down a slope with step-ups at tops of successive subfields, but I think the range should be increased to at least 5'. The proposed increase in minimum pressure head from 2' to 3', if nothing else, is going to confuse a high percentage of operators. Thousands of existing LPP's were designed at 2', and operators have been taught for decades that in the absence of a set of plans, assume 2' (except in Wake). And a regulatorily-supported increase in minimum design head is going to encourage that subset of operators who believe in increasing the head on an existing system to more closely approach design PDR over actually troubleshooting a system. I think it's reasonable to start with a higher head on a flatter site, but I see no advantage to starting at a higher head on any significant slope.		Kathy Morris, Agri-Waste Technology, Inc, 10/26/2017	Disagree. We want to maintain as much scour velocity in the orifices as possible. Pressure can drop quickly in an LPP system, and the system can suddenly be operating at less than two feet of pressure head.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0907	81	22	When considering the amount of "taper" in flow rate from upper lines to lower lines, "10 to 30 %" doesn't adequately address the effect of the *number* of laterals, and "elevation difference" doesn't adequately address the horizontal component of slope. The amount of flow reduction possible from any lateral to the next one down is mostly limited by the available hole sizes; and for systems with many laterals, it's often not possible to keep the sum of the steps from one lateral to the next under 30% because the steps can't be made small enough. (For laterals of varying lengths we compare "instantaneous flow rate" instead of "flow per lateral"to identify the reduction between laterals.) In my opinion, the more laterals there are on a given slope, the greater overall reduction is needed to account for subsurface lateral water movement between trenches. The other component of "taper", draining volume of manifold, also grows with the number of laterals. I think a less restrictive way to address the desire to reduce the flow rate down the field is to consider the change from one lateral to the next rather than a top-to- bottom overall restriction.		Kathy Morris, Agri-Waste Technology, Inc, 10/26/2017	We don't think we can address this in any more detail in the rules. Any further clarification could end up confusing the issue even more. This issue is best addressed with LPP design classes.
.0907	81	22	The problem with trying to quantify this approach, however, is that saying something like " at least" or "not more than" x% from one lateral to the next lowest" doesn't take into account the elevation difference between adjacent laterals, which can vary from top to bottom of the field, or varying lengths of manifold segments between adjacent laterals on sites with varying topography, or where the manifold path isn't perpendicular to the laterals (such as along an artificial boundary like a property line). It also wouldn't allow fiddling with the flow in bottom laterals of successive subfields to provide a little extra storage capacity for a greater draining volume, which has been a common design practice for a long time. On almost-but-not-really flat sites, trying to get as *much* as a 10% reduction can lead to uneven distribution across the field. I agree that reduction across a lateral field on a slope is desirable, but LPP sites and the flow charts that represent them are so highly variable that one-size-fits-all regulation does not, in fact, fit. If nothing else, I would like to see language added after that percentage range that allows "reasonable variation to accommodate unusual numbers of laterals and/or site-specific topography".		Kathy Morris, Agri-Waste Technology, Inc, 10/26/2017	We don't think we can address this in any more detail in the rules. Any further clarification could end up confusing the issue even more. This issue is best addressed with LPP design classes.
.0907	81	25	This is the only mention of “multiple throttling valves”. What exactly is meant by “multiple”? More than one? I think it would be useful to address preferred location for control valves more so than how many. See comments on (e)(12) below.		Kathy Morris, Agri-Waste Technology, Inc, 10/26/2017	Agree. Language has been modified to address this comment.
.0907	81	27	Is a list of State approved automatically alternating valves available?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	At this time, no. If any other valves are proposed for use and approved by the State, that information is available with a public records request.
.0907	81	30 to 33	We would recommend that lines 30 to 33 on page 81 also state that the turn-ups should be white in color to differentiate them from grey electrical conduit that may be used on electrical components. We would also recommend that the turn-ups be long radius sweeps to allow for better access for inspection and cleaning equipment (if filters are not used on the pump) as a normal 90 degree bend is often too tight to pass this equipment.		Gary Koteskey, Sim/Tech Filter, Inc, 10/31/2017	The term "approved equivalent" would already cover this option. Different LHDs have developed their preferred ways of facilitating cleanout. We do not recommend sweep fittings that are not pressure rated and would not enable the invert of the pressure lateral to be observed or measured. Cleaning equipment can navigate past a 90 degree bend in 1 1/4 inch pipe, which is what is most typically used. Pressure rated Sch 40 PVC is already white.

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.0907	81	35	This seems to fly right in the face of (e) (7)(C) by *limiting* the reduction in flow across a subfield to 15%. Clarification needed on "1st and last". It's obvious when a manifold is fed from one end or the other, where I would assume "first" is the one closest to where the supply line enters the manifold, but what about feeding a manifold from its center? Does that give you two "first" laterals? What's the difference between "flow rate" and " discharge rate"? Terminology should be consistently applied. To be consistent with the operator curriculum, "pump delivery rate" is a candidate, although there is some disagreement on whether it's okay to use that term for flows at other than "designed" head.		Kathy Morris, Agri-Waste Technology, Inc, 10/26/2017	Agree. Have made changes to modify this section based on the comments received.
.0907	82	2 to 3	Remove		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. This criteria is still valid and no reason has been provided for elimination.
.0907	82	4	Why require Sch. 80 here, when the components on either side are Sch. 40 ? (e)(1) and (e)(9)		Kathy Morris, Agri-Waste Technology, Inc, 10/26/2017	Agree
.0907	82	6	"at <u>both</u> ends of the supply manifold"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree with modification
.0907	82	8	Another terminology issue – gate valves is a more common term than the "throttling" valves mentioned only once (above). Could call them all "pressure regulating valves" to distinguish from isolation valves. 100' sounds purely arbitrary. I think it would be a better idea to get rid entirely of a pressure- regulating valve in the pump tank (replace it with an on-off isolation ball or globe valve) and specify that field or subfield pressure-regulating valves should be located together at the distal end of the supply line serving geographically-contiguous fields or subfields.		Kathy Morris, Agri-Waste Technology, Inc, 10/26/2017	Agree
.0907	82	8, 11	Are a list of these approved valves and access devices available?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	At this time, no. If any valves are proposed for use and approved by the State, that information is available with a public records request.
.0907	82	12	This valve is in addition to the gate valve in the PT		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Yes
.0907	82	14	Change to 4 ft to 7 ft		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. We do not have sufficient justification to change the pressure head to 4 to 7 feet.

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.0907	82	14	I don't know which came first: the 3-foot elevation difference limit in the Rules, or the 3-foot elevation difference limit in the 1982 Sea Grant publication that has served as the basic guidance for LPP designers for 35 years. The Sea Grant pub doesn't include a bibliography or other background for its statements of "what is best". It states the desirability of pressure heads from 2 to 4 feet, because "higher pressures cause local scouring", but then its 3' range allows heads of up to 5'. Wake County's local rules have long allowed heads up to 7'. In my opinion, the advent of holes pointed up inside sleeves has eliminated potential for scouring. So… why impose this limit in elevation change across a single subfield? On steeper slopes, it requires multiple valves for adjusting pressure head. Even in the Piedmont, let alone the mountains, it can lead to subfields with only one or two laterals. I can think of two drawbacks to a greater range. One, already observed in Wake, is the problem of measuring/observing head in a 7+' standpipe on a bottom lateral. They tend to fall over under their own weight. However, few regulators and fewer operators set standpipes up on every lateral unless they're doing some serious troubleshooting – a sadly rare occurrence. The other drawback is a possible need to increase the diameter of the manifold relative to the laterals to accommodate an increased number of connections, but to some extent that cost is offset by the need for fewer valves.		Kathy Morris, Agri-Waste Technology, Inc, 10/26/2017	Disagree. We want to maintain as much scour velocity in the orifices as possible. Pressure can drop quickly in an LPP system, and the system can suddenly be operating at less than two feet of pressure head.
.0907	82	14	So – I think some kind of range limit might be appropriate, mainly to make it easier to achieve a gradual taper in flow rate down a slope with step-ups at tops of successive subfields, but I think the range should be increased to at least 5'. The proposed increase in minimum pressure head from 2' to 3', if nothing else, is going to confuse a high percentage of operators. Thousands of existing LPP's were designed at 2', and operators have been taught for decades that in the absence of a set of plans, assume 2' (except in Wake). And a regulatorily-supported increase in minimum design head is going to encourage that subset of operators who believe in increasing the head on an existing system to more closely approach design PDR over actually troubleshooting a system. I think it's reasonable to start with a higher head on a flatter site, but I see no advantage to starting at a higher head on any significant slope.		Kathy Morris, Agri-Waste Technology, Inc, 10/26/2017	Disagree. We want to maintain as much scour velocity in the orifices as possible. Pressure can drop quickly in an LPP system, and the system can suddenly be operating at less than two feet of pressure head.
.0907	82	17	To field, prevent draining to PT by use of check valve		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree. This check valve is required in Rule .1102.
.0907	82	22	This should be modified to specify 4" cover over the *trench media* rather than the dispersal field, unless the requirement is now to import fill over the entire lateral field.		Kathy Morris, Agri-Waste Technology, Inc, 10/26/2017	Agree
.0907	82	23	.0907(e)(16) "trench products approved under Section .1700 of this Subchapter shall be installed in accordance with their PIA approval." Again, specifically mentioning the PIA products as a viable LPP solution, while negligently omitting Panel Block Systems, is improper. PPBPS have been used in conjunction with LPP technology since its inception.	.0907(e)(17) "trench products approved under section .0905 shall be installed in accordance with manufacturer's specifications."	Logan Settle, T&J Panel, 10/30/2017	Agree with modifications
.0908	82	30	Note that it appears that these drip rules are only for anaerobic drip systems.		Bill Fenner, Aquapoint, 10/29/2017	Agree. Drip with advanced pretreatment is covered in Section .1200.
.0908	84	16	same rule as 15A NCAC 18E .0510 SPECIAL SITE EVALUATION ((5)(D) Not needed		Joe Lynn, 10/31/2017	Agree
.0908	85	19	Turtle back 0.5% from center all around		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree and this is already included in this rule.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0908	85	23	Add new - landscaped to adequately to prevent surface water ponding		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree and this is already included in this rule.
.0909	85	29	Fill systems are ideally suited for the coastal plains, not the piedmont. They should be allowed east of I-95 only! Since I am certain this stipulation will not be made, I must say I am happy to see that the suitable slope has been changed from 15% in the current rules to 4%. That makes a lot more sense.		Kim Warren, Chatham County Health Dept, 10/30/2017	Thank you
.0909	85	29	Panel systems should be addressed in this subsection.		Logan Settle, T&J Panel, 10/26/2017	We are unaware of any PPBPS that have been installed in fill. We have also reviewed the design manual for PPBPS and note that there are no provisions for installing PPBPS in fill. If PPBPS are used in fill, they would need to meet the fill rules on LTAR, when pressure dispersal is required, and no trench length reductions. We have added language to Rule .0902(b) that addresses this issue.
.0909	85	29	PPBPS's have been used in conjunction with these subsections for many years, and with much success. PPBPS should be addressed in each of these subsections. It is important to remember that PPBPS are considered a "Modification to Conventional Septic Systems," and are able to be used in any way that a conventional septic system can be used.	Add line in each section (perhaps beneath the line: "trench products approved under Section .1700 of this Subchapter shall be installed in accordance with PIA approval"), stating "trench products approved under Section .0905 of this section shall be installed in accordance with manufacturer's specifications."	Logan Settle, T&J Panel, 10/30/2017	We are unaware of any PPBPS that have been installed in fill. We have also reviewed the design manual for PPBPS and note that there are no provisions for installing PPBPS in fill. If PPBPS are used in fill, they would need to meet the fill rules on LTAR, when pressure dispersal is required, and no trench length reductions. We have added language to Rule .0902(b) that addresses this issue.
.0909	85	30	one or more trenches	Broaden the rule language to incorporate beds and other disposal methods or remove the reference to trenches. CH: remove "one or more trenches" from the language.	Lee Rashkin, Presby Environmental, 10/31/2017	Agree
.0909	85	32	"the fill pad shall be constructed when the wastewater system..."	"the fill pad shall be constructed 3 months before the wastewater system..." Allows for settling	Joe Soulia, Orenco Systems, 10/31/2017	Disagree. Have removed this sentence. The fill pad will be listed as a site modification on the IP and must be completed prior to the CA being issued. This will allow the LHD to inspect the fill pad prior to issuing the CA (and would allow for settling if it occurs).
.0909	85	32	(a) "The fill pad shall be constructed when the wastewater system is installed". Not clear as to the time line between the fill pad and the system installation. What is to prevent the fill pad from being installed and the system not installed? What are the ramifications or consequences? The CA would have to be conditioned to install fill pad first and approved. Can this be added?		Len Gilstrap, Carteret LHD, 10/31/2017	Agree this is confusing. Have deleted this sentence.
.0909	85	32	The requirement for the fill pad to be constructed when the wastewater system is installed is good and bad. The fill pad must be constructed to make the site suitable for the issuance of the CA. If the fill pad can be a condition of the CA and installed with the system, this section should be reworded or explained better. A phased CA will be required for this.		Len Gilstrap, Carteret LHD, 9/20/2017	Agree, and the sentence has been removed.
.0909	85	32	"the fill pad shall be constructed when the wastewater system..."	"the fill pad shall be constructed 3 months before the wastewater system..." Allows for settling	Steve Barry, AQWA, 10/31/2017	Disagree. Have removed this sentence. The fill pad will be listed as a site modification on the IP and must be completed prior to the CA being issued. This will allow the LHD to inspect the fill pad prior to issuing the CA (and would allow for settling if it occurs).

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0909	86	1	I oppose these rule allowances. NCAC 18A .1957(b) allows fill systems to be installed on sites with uniform slopes of less than 15 percent. NCAC 18E .0909 lowered the slope allowance to a seemingly arbitrary 4 percent. I am not aware of a study that yielded supporting scientific justification for this dramatic change in allowable slope for fill systems. Without such support, the proposed change appears to be arbitrary and unwarranted.	Maintain the same slope limitations currently identified in NCAC 18A .1957(b)(1)(C).	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Disagree. The majority of areal fill systems are permitted in the Coastal Plain physiographic region where level sites predominate. The OSWP polled Piedmont and Mountain counties who install areal fill systems regarding their approach and the consensus was that they use sites with approximately 4% slope. Their justification is that excessive slopes do not readily accommodate the coarse soil material required for use in areal fill (i.e., fill material migrates downslope unless sites chosen are relatively level). To the Branch, this is a common-sense issue based upon historical knowledge. We are always open to receiving more information on this topic.
.0909	86	7 to 12	If pressure dispersal is used, (Used twice)	Vertical separation distance breaks from restrictive layers should be based on the quality of effluent entering the ground not the method of disposal. CH/RE: remove reference to pressure dispersal and replace with secondary treatment effluent quality standards.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. The requirement for pressure dispersal is in the current rules and is of a conservative design to help minimize system failure. Additionally, the option to use advanced pretreatment with fill systems in addressed in Section .1200.
.0909	87	12 to 13	explain		Glenn Hines, 10/29/2017	Additional fill material may be brought in to a site that can be used to meet the vertical separation distance requirements in the rules. The fill material brought in must be suitable and approved by the LHD.
.0909	86	13	The rule states that "Fill systems with a design daily flow greater than 480 gallons per day shall use pressure dispersal systems." Pressure distribution is being used to restrict innovative approaches to wastewater disposal.	Broaden the rule language to incorporate other methods of disposal. Why are there so many different and various sizing restrictions for the different categories of systems in the rules? This is not necessary and the rules can be simplified! CH/RE: remove the "pressure dispersal method" reference and replace with a method of wastewater distribution. The language used should allow for other options beside just pressure dispersal. Simplify the rules by deciding on a single GPD and linear footage limit requirement for all system-not something different for each category of system.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. The design criteria for fill systems is based on fill systems/mound systems that were installed in North Carolina a number of years ago. Based on the experience with these systems, the conservative design criteria for fill systems was developed. This criteria includes a design daily flow limt, design as an aeral fill system, bigger pads, lower LTARs, slope restrictions, and other criteria to help mitigate failure. A PIA approval can always be issued for specific bed design criteria that vary from what is stated in the rule.
.0909	87	21	The design daily flow shall not exceed 480 gallons per day.	Simplify the rules by deciding on a single GPD and linear footage limit requirement for all system-not something different for each system category. CH/RE: Change language or replace.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. The design criteria for fill systems is based on fill systems/mound systems that were installed in North Carolina a number of years ago. Based on the experience with these systems, the conservative design criteria for fill systems was developed. This criteria includes a design daily flow limt, design as an aeral fill system, bigger pads, lower LTARs, slope restrictions, and other criteria to help mitigate failure. A PIA approval can always be issued for specific bed design criteria that vary from what is stated in the rule.
.0909	87	22	elimate entirely		Glenn Hines, 10/29/2017	Disagree. The requirement for pressure dispersal is in the current rules and is of a conservative design to help minimize system failure.
.0909	87	22	Pressure dispersal shall be used and shall meet all the requirements of Rule .0910 except Rule .1910(b).	Broaden the rule language to incorporate other methods of disposal. CH/RE: remove the "pressure dispersal method" reference and replace with a method of wastewater distribution. The language used should allow for other options beside just pressure dispersal.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. The requirement for pressure dispersal is in the current rules and is of a conservative design to help minimize system failure.
.0909	87	25	The LTAR shall not exceed 0.5 gallons per day per square foot.	Soil texture is the major soil characteristic that determines the LTAR for any given soil. CH: Remove different LTAR rate for all fill systems and base on soil structure and treatment.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. The LTAR is based on the soil texture for the site and takes into consideration past history with fill systems. The conservative nature of the design is based on this past experience.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0909	87	26 to 29	Existing fill sites with 48 inches of Group I soils may use conventional trenches with a maximum LTAR of 1.0 gallons per day per square foot in lieu of a pressure dispersal system. The minimum separation distance between the infiltrative surface and any UNSUITABLE soil horizon, characteristic, or material shall be 24 inches for pressure dispersal systems and 48 inches for conventional systems.	Vertical separation distance breaks from restrictive layers should be based on the quality of effluent entering the ground not the method of disposal. CH/RE: Change language or replace.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. The design criteria for fill systems is based on fill systems/mound systems that were installed in North Carolina a number of years ago. Based on the experience with these systems, the conservative design criteria for fill systems was developed. This criteria includes a design daily flow limt, design as an aeral fill system, bigger pads, lower LTARs, slope restrictions, and other criteria to help mitigate failure. A PIA approval can always be issued for specific bed design criteria that vary from what is stated in the rule.
.0909	88	6	The LTAR shall not exceed 1.0 gallons per day per square foot for gravity distribution or 0.5 gallons per day per square foot for pressure dispersal system	Not consistent - In other cases the LTAR is increased for pressure distribution. CH: Remove different LTAR rates for gravity and pressure and base on soil structure and treatment.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. The LTAR decreases when used with septic tank effluent pressure dispersal when compared with a conventional system. The only time the LTAR is increased with the use of pressure dispersal is when advanced pretreatment is used. The LTARs for fill systems are based on the applicable soil groups. The restriction on the LTAR is based on limiting the flow to the site and not hydraulic overloading the site.
.0909	88	9	Is it intended that an authorized agent can approve other fill systems on a site specific basis?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Yes, but language has been modified to clarify this information.
.0910	88	16	This rule needs to specify more clearly what is covered. I think the intention is for it to apply to groundwater lowering but it is not clear. Interceptor drains do not need all of this. I suggest adding the requirements for interceptor drains to (d).		Joe Lynn, 10/31/2017	Agree
.0910	88	6	This comment was submitted previously by the Wastewater System Manufacturers Stakeholder Group, but was not addressed. Its is being resubmitted. The draft rules indicate that other artificial drainage devices, including surface diversions and French drains shall comply with NRCS/USDA guidance documents. Its is not clear how a product such as bundled expanded polystyrene can be used in drainage applications. Bundled expanded polystyrene products manufactured in-state at a Salisbury factory are used in drainage applications in North Carolina today. More broadly, this practice has been in use nationally for over a decade. These products are approved as accepted systems under current Rule. 1969 and should be provided with an administrative mechanism for usage. The proposed rule will cause a loss of business for a company manufacturing bundled expanded polystyrene products.	Ensure that manufactured products can be used for construction of artificial drainage system by allowing proprietary devices certified by nationally recognized certification bodies, as shown below. (e) Other artificial drainage systems, including surface water diversions, shall comply with USDA-NRCS guidance 6 documents. Proprietary drainage media products used for the construction of artificial drainage systems shall be certified by a nationally recognized certification body, as defined by G.S. 130A-4 343(a)(6). The EZflow product maintains two certifications by nationally recognized certification bodies and would therefore comply.	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Disagree. The OSWP does not approve drainage media products. We do not specify the media to be used in the interceptor drain.
.0910	88	16	Panel systems should be addressed in this subsection.		Logan Settle, T&J Panel, 10/26/2017	Disagree. The OSWP does not approve drainage media products. We do not specify the media to be used in the interceptor drain.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.0910	88	17	a) Artificial drainage systems are a site modification that may be used to overcome surface water flow, lateral sub-surface water flow, or a high water table. b) Groundwater Lowering Systems a. May be used on the following sites i. Sites where the water table is of unsuitable depth ii. Group I and II soils are present to a depth of ? b. Must be design in accordance with the following c. When a pump is utilized, must be designed according to the following d. Must contain the following plans and specification in addition to above c) Interceptor Drains d) Other artificial drainage systems		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0910	88	18	After "soil wetness condition" add "or potential lateral flow"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0910	88	28	This comment was submitted previously by the Wastewater System Manufacturers Stakeholder Group, but was not addressed. Its is being resubmitted. The draft rules indicate that other artificial drainage devices, including surface diversions and French drains shall comply with NRCS/USDA guidance documents. Its is not clear how a product such as bundled expanded polystyrene can be used in drainage applications. Bundled expanded polystyrene products manufactured in-state at a Salisbury factory are used in drainage applications in North Carolina today. More broadly, this practice has been in use nationally for over a decade. These products are approved as accepted systems under current Rule. 1969 and should be provided with an administrative mechanism for usage. The proposed rule will cause a loss of business for a company manufacturing bundled expanded polystyrene products.	Ensure that manufactured products can be used for construction of artificial drainage system by allowing proprietary devices certified by nationally recognized certification bodies, as shown below. (e) Other artificial drainage systems, including surface water diversions, shall comply with USDA-NRCS guidance 6 documents. Proprietary drainage media products used for the construction of artificial drainage systems shall be certified by a nationally recognized certification body, as defined by G.S. 130A-4 343(a)(6). The EZflow product maintains two certifications by nationally recognized certification bodies and would therefore comply.	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Disagree. The OSWP does not approve drainage media products. We do not specify the media to be used in the interceptor drain.
.0910	89		Outlet that governs what happens on site must be under control of the entity that is impacted by the drainage. Also have to able able to control outlet from site.		Bob Rubin, NCSU, 10/4/2017	Agree
.0910	90	4	Interceptor drains/curtain drains shall be used where lateral flow might be intercepted after the installation of the dispersal field i.e. by the lateral trenches.		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.0911	91	11	This provision has a circular reference to itself.		Chad Gambill, Caldwell County Health Dept, 10/31/2017	Agree and have modified language
.1002	All	All	This would be a good time to set effluent standards for Recycle/Reuse pretreatment systems, and siting criteria for subsurface dispersal, rather than just recycling for non-potable uses. Then include these standards into Rule with other subsurface system types.	This would be a good time to set effluent standards for Recycle/Reuse pretreatment systems, and siting criteria for subsurface dispersal, rather than just recycling for non-potable uses. Then include these standards into Rule with other subsurface system types.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree. An effluent standard for reuse, in addition to siting and sizing criteria, have been added.
.1002	91	33	The section covering Wastewater Recycle/Reuse should be expanded to provide guidance for wastewater reuse for landscaping applications, sod production, use in product manufacturing (concrete, asphalt), conjunctive uses and other potential reuse applications. The reuse of treated wastewater will be of greater importance in our industry as society focus more on sustainability in our development planning and the rules should anticipate this to be proactive and not reactive.		Bill Fenner, Aquapoint, 10/29/2017	Agree with modifications. The language has been modified in this Section to allow for use with a DEQ reclaimed water system or a system permitted by Building Inspections for toilet flushing with reclaimed water. This rule has been modified to add a reclaimed water effluent quality standard and siting and sizing criteria.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1002	91	33 to 37	Reuse and Recycle Systems	Flesh this out. Build on it. Please form a working group to build on this. The technology and institutional knowledge is there to do these systems and do them well.	Joe Soulia, Orenco Systems, 10/31/2017	Agree with modifications. The language has been modified in this Section to allow for use with a DEQ reclaimed water system or a system permitted by Building Inspections for toilet flushing with reclaimed water. This rule has been modified to add a reclaimed water effluent quality standard and siting and sizing criteria.
.1002	91	33 to 37	Reuse and Recycle Systems	Flesh this out. Build on it. Please form a working group to build on this. The technology and institutional knowledge is there to do these systems and do them well.	Steve Barry, AQWA, 10/31/2017	Agree with modifications. The language has been modified in this Section to allow for use with a DEQ reclaimed water system or a system permitted by Building Inspections for toilet flushing with reclaimed water. This rule has been modified to add a reclaimed water effluent quality standard and siting and sizing criteria.
.1002	91	34	"toilet flushing or irrigation"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree with modifications. The language has been modified in this Section to allow for use with a DEQ reclaimed water system or a system permitted by Building Inspections for toilet flushing with reclaimed water. This rule has been modified to add a reclaimed water effluent quality standard and siting and sizing criteria.
.1002	91	37	Is this OSWP jurisdiction? Wake County supports inclusion.		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree with modifications. The language has been modified in this Section to allow for use with a DEQ reclaimed water system or a system permitted by Building Inspections for toilet flushing with reclaimed water. This rule has been modified to add a reclaimed water effluent quality standard and siting and sizing criteria.
.1002	92	1	"for direct body contact"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree with modifications. The language has been modified in this Section to allow for use with a DEQ reclaimed water system or a system permitted by Building Inspections for toilet flushing with reclaimed water. This rule has been modified to add a reclaimed water effluent quality standard and siting and sizing criteria.
.1101	92	16	Sentence not required		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. This clarification is necessary.
.1101	92	18	"systems ~~shall be~~ is preferably designed"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Either shall or it is removed from the rules. Words ending in "ly" must be defined if they are proposed to be used.
.1101	92	23 to 24	"The pump operating flow rate..."	Strike. If this was true, everything would be pressure dispersal. What does it mean?	Joe Soulia, Orenco Systems, 10/31/2017	Agree
.1101	92	23 to 24	"The pump operating flow rate..."	Strike. If this was true, everything would be pressure dispersal. What does it mean?	Steve Barry, AQWA, 10/31/2017	Agree
.1102	92	34	"removable without requiring entrance into the tank."	"within 18" of the lid." entrance of what? Breaking the plane of the tank? bodily entrance? an arm? what? Just make it 18"	Joe Soulia, Orenco Systems, 10/31/2017	Disagree. The 18 inches may not be practical in all situations.
.1102	92	34	"removable without requiring entrance into the tank."	"within 18" of the lid." entrance of what? Breaking the plane of the tank? bodily entrance? an arm? what? Just make it 18"	Steve Barry, AQWA, 10/31/2017	Disagree. The 18 inches may not be practical in all situations.
.1102	93	2	This hole must be located between check valve and the pump.		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.1102	93	6	"...These backflow prevention..."	strike. Why? There are times it is nice to have it on the field side of the disconnect. Talked to several good operators and no one knows why this would be mandated by rule. Too prescriptive.	Joe Soulia, Orenco Systems, 10/31/2017	Agree
.1102	93	6	"...These backflow prevention..."	strike. Why? There are times it is nice to have it on the field side of the disconnect. Talked to several good operators and no one knows why this would be mandated by rule. Too prescriptive.	Steve Barry, AQWA, 10/31/2017	Agree

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.1103			Current practice is to set the pump on a 4 to 8 inch block. This is outdated. WE have effluent filters on all systems. There should be no substantial solids flowing into the pump tank. This block in not needed. The block also makes pump replacement difficult without pumping the pump tank completely dry.		Cory Brantley, 10/2/2017	Understand concept. Will discuss internally best way to approach since it is not in the rules.
.1103	93	18	Support control panels. The use of control panels should be manadatory.		Cory Brantley, 10/2/2017	Thank you
.1103	93	24	A motor contactor breaks all current to the pump, but a solid-state relay controls current to the pump. Having a solid-state relay will serve the same purpose as the motor contractor, but attaching the requirement to break all current to the pump is not appropriate. The "breaks all current" modified is not needed for a solid-state relay.	Modify text as shown: (3) a motor contactor which breaks all current to the pump or solid-state relay ~~which breaks all current to the pump~~;	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Agree
.1103	93	25	"latching"	strike. Spring loaded hoa switches can be safer to user and pump at times and are UL approved.	Joe Soulia, Orenco Systems, 10/31/2017	Agree
.1103	93	25	"latching"	strike. Spring loaded hoa switches can be safer to user and pump at times and are UL approved.	Steve Barry, AQWA, 10/31/2017	Agree
.1103	93	27	"a pump run light"	strike. Pump run lights can lead to a false sense of security ie a false negative. "I can open the union because the pump run light is off." Additionally they are costly and expensive. Lose lose lose proposition.	Joe Soulia, Orenco Systems, 10/31/2017	Disagree. We are unaware of any negatives aside of the one identified here. Overall, there are more positives than negatives with the pump run light.
.1103	93	27	"a pump run light"	strike. Pump run lights can lead to a false sense of security ie a false negative. "I can open the union because the pump run light is off." Additionally they are costly and expensive. Lose lose lose proposition.	Steve Barry, AQWA, 10/31/2017	Disagree. We are unaware of any negatives aside of the one identified here. Overall, there are more positives than negatives with the pump run light.
.1103	93	28 to 29	elimate, only use for systems that are maintained, more costly for residential		Glenn Hines, 10/29/2017	Disagree. The use of elapsed time meters and cycle counters can help residential systems tremendously, especially when there is a problem and the system needs to be troubleshot.
.1103	93	29	It does not appear that an event counter provides information useful to the operator or regulator that is not provided by the elapsed time meter. Please consider removing this requirement from the rules		Bill Fenner, Aquapoint, 10/29/2017	Disagree. The use of cycle counters can help systems tremendously, especially when there is a problem and the system needs to be troubleshot.
.1102	93	36	"The control panel bottom shall be mounted at least 24 inches and no more than 36 inches"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	ABCD Construction, 9/14/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Andrew Daywalt, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Ben Hildreth, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Benny Myers, Myers Septic Tanks Co, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.

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.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Brian Beebe, 10/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Cable Septic and Backhoe Service, 10/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Charles Dodge, C&C Septic Services, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Charles Driggers, Driggers Septic Tank, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Charlie Brice, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Chris Hedrick, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Chriscoe Bacchoe Service, 10/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.

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.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Daniel Newsome, D&D Organic Farming, 10/24/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Danny Dennis, 10/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	David Murphy, DRM, 10/24/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Derrick Driggers, Driggers Septic Tank, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Donald Martin, 10/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	THE PROPOSAL TO INCREASE THE HEIGHT OF THE CONTROL PANEL TO 36 INCHES MAY BE EASIER FOR THE OPERATOR, BUT IT WOULD BE BURDENSOME AND UNNECESSARY AND NOT WELL RECEIVED BY THE OWNER.	CONTINUE TO REQUIRE A MINIMUM HEIGHT OF 12 INCHES ADJACENT TO THE PUMP TANK.	Doug Lassiter, NCSTA, 10/24/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	The increase in height from 12 inches above finished grade to 36 inches above finished grade will be easier for the operator, which is semi-annually for most systems, just a few hours each year. This proposal means the homeowner is faced with the onstruction 24/7/365 and will not be accpeted by the majority of homeowners. The added distance of the control panel to the pump tank is unnecessary, just say adjacent.	Go back to 12 inches and remove 50 yards	Doug Lassiter, NCSTA, 9/20/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.

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.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Garland Walker, 10/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Gerald Leonard, 10/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Hank Hill Grading, 10/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Harry Hatcher, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Jeff Link, Rowan, LHD, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Jerry Pearce, 9/15/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Johnny Strickland, 10/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.

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.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Kearns Pumping Service, 10/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Keith Blackburn, B & C Concrete, 9/20/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Kippy Blanks, 9/28/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Larry Beam, 9/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Lawrence Henning, 9/15/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Lester Breedlove, 10/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Mark Johnson, 10/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Marty Maness, 11/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Max Locklear, Locklear's Backhoe Service, 10/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Michael Barger, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.

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.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Paragraph (d)	The increased height from 12 inches to 36 inches is not necessary. This will be a year round obstruction to the homeowner.	NC Home Builders Assn, 10/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Parrish Homes and Pools,Inc, 10/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Pat Rentz, VIP Inspection Services, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Perry's Grading & Septic Service, 9/14/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Randy Lackey, Love Valley Septic, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Robert F. Youngblood, Youngblood Construction, 9/14/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Ronnie Burgin, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.

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.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Russell Lineberry, 10/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Sterlin Church, Church's Backhoe Service, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Steve Cannon, Rowan LHD, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Terry Maples, 10/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	TM Grading, Inc, 10/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Tyler Jolley, 9/15/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Valentina Oxendine, 10/23/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Vince Scroggins, 9/14/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.

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.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36	Delete "36 inches above finished grade, within 50 ft of and in direct view of the pump tank"	Add "12 inches above finished grade and immediately adjacent to pump tank"	Willilam Garrison, EcoClean Septic, 9/25/2017	Disagree, but have modified the language to reduce the control panel height. Cannot use the term immediately adjacent to the pump tank. That would require a definition of what immediately adjacent is. With the proposed language, the control panel can be mounted on the house, which would remove it from the owner's view.
.1103	93	36 to 37	36" panel height	no change. Hallelujah	Joe Soulia, Orenco Systems, 10/31/2017	Agree. However we have modified the panel height down some to address other comments received.
.1103	93	36 to 37	36" panel height	no change. Hallelujah	Steve Barry, AQWA, 10/31/2017	Agree. However we have modified the panel height down some to address other comments received.
.1103	93	37	This requires control panels to always be accessible. Often control panels are placed inside buildings or otherwise secured from public access.	Recommend revising as follows: "The control panels shall always be accessible to the system operator and LHD."	Bill Fenner, Aquapoint, 10/29/2017	Agree
.1103	94	1	Delete (e)		ABCD Construction, 9/14/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Andrew Daywalt, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Ben Hildreth, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Brian Beebe, 10/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Cable Septic and Backhoe Service, 10/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Charles Dodge, C&C Septic Services, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Charles Driggers, Driggers Septic Tank, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Charlie Brice, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Chris Hedrick, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.

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.1103	94	1	Delete (e)		Chriscoe Bacchoe Service, 10/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Daniel Newsome, D&D Organic Farming, 10/24/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Danny Dennis, 10/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		David Murphy, DRM, 10/24/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Donald Martin, 10/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Garland Walker, 10/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Gerald Leonard, 10/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Hank Hill Grading, 10/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Harry Hatcher, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Jeff Link, Rowan, LHD, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Jerry Pearce, 9/15/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Johnny Strickland, 10/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Kearns Pumping Service, 10/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Keith Blackburn, B & C Concrete, 9/20/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.

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.1103	94	1	Delete (e)		Larry Beam, 9/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Lawrence Henning, 9/15/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Lester Breedlove, 10/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Mark Johnson, 10/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Marty Maness, 11/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Michael Barger, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Parrish Homes and Pools,Inc, 10/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Pat Rentz, VIP Inspection Services, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Perry's Grading & Septic Service, 9/14/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Randy Lackey, Love Valley Septic, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Ronnie Burgin, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Russell C. Trodgon, 9/18/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Russell Lineberry, 10/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Sterlin Church, Church's Backhoe Service, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.

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.1103	94	1	Delete (e)		Terry Maples, 10/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		TM Grading, Inc, 10/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Tyler Jolley, 9/15/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Valentina Oxendine, 10/23/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Vince Scroggins, 9/14/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	1	Delete (e)		Willilam Garrison, EcoClean Septic, 9/25/2017	Disagree. This is only required when the control panel is more than 10 feet from the pump tank access riser. Have tried to clarify that in the proposed langauge.
.1103	94	12	Replace "DSE" with "pump tank"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		ABCD Construction, 9/14/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Andrew Daywalt, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Ben Hildreth, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Agree
.1103	94	14	Requires a minimum of 18” of effluent be maintained in pump tanks. The next line, (h)(2), requires the pump to remain submerged which makes this volume requirement excessive and redundant. It should be deleted.		Bill Fenner, Aquapoint, 10/29/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Brian Beebe, 10/23/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Cable Septic and Backhoe Service, 10/23/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Charles Dodge, C&C Septic Services, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Charles Driggers, Driggers Septic Tank, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Charlie Brice, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Chris Hedrick, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Chriscoe Bacchoe Service, 10/23/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Agree

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1103	94	14	18 inches minium liquid depth in a pump tank will result in bigger and more costly pump tanks.	Should be determined by the size of the effluent pump. Some pumps are 12 inches tall and could easily have only a 10 inch minimum liquid depth.	Cory Brantley, 10/2/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Daniel Newsome, D&D Organic Farming, 10/24/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Danny Dennis, 10/23/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		David Murphy, DRM, 10/24/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Donald Martin, 10/23/2017	Agree
.1103	94	14	REQUIREMENT OF 18 INCHES OF EFFLUENT TO REMAIN IN THE PUMP TANK IS NOT NECESSARY AS A SET DEPTH. THE DECISION SHOULD BE A RESULT OF THE NECESSARY REQUIREMENTS OF THE PUMP MANUFACTURER.	ELIMINATE THE REQUIREMENT OF 18 INCHES.	Doug Lassiter, NCSTA, 10/24/2017	Agree
.1103	94	14	Where does the 18 inches come from? The subsequent requirements give the actual depth of the pump tank for the sake of the pump. This language says 18 inches, not a minimum of 18 inches or anything that would differentiate between the pump design.	Go back to a minimum of 12 inches	Doug Lassiter, NCSTA, 9/20/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Garland Walker, 10/23/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Gerald Leonard, 10/23/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Hank Hill Grading, 10/23/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Harry Hatcher, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Jeff Link, Rowan, LHD, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Jerry Pearce, 9/15/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Johnny Strickland, 10/23/2017	Agree
.1103	94	14	The effect of increasing this from 12" to 18" will be to necessitate larger pump tanks on some sites where low LTARs require larger fields and thus larger dosing volumes. I think that 12" or some pump submerfence per manufacturer's recommendation, whichever is greater, is adequate.		Kathy Morris, Agri-Waste Technology, Inc, 10/30/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Kearns Pumping Service, 10/23/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Keith Blackburn, B & C Concrete, 9/20/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Kippy Blanks, 9/28/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Larry Beam, 9/23/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Lawrence Henning, 9/15/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Lester Breedlove, 10/23/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Mark Johnson, 10/23/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Marty Maness, 11/23/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Michael Barger, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Agree

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1103	94	14	Change 18 inches to 12 inches		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Parrish Homes and Pools,Inc, 10/23/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Pat Rentz, VIP Inspection Services, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Perry's Grading & Septic Service, 9/14/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Randy Lackey, Love Valley Septic, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Ronnie Burgin, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Russell C. Trodgon, 9/18/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Russell Lineberry, 10/23/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Sterlin Church, Church's Backhoe Service, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Steve Cannon, Rowan LHD, 9/25/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Terry Maples, 10/23/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		TM Grading, Inc, 10/23/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Tyler Jolley, 9/15/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Valentina Oxendine, 10/23/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Vince Scroggins, 9/14/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Agree
.1103	94	14	Change 18 inches to 12 inches		Willilam Garrison, EcoClean Septic, 9/25/2017	Agree
.1103	94	18	This wording is confusing – "The high water alarm float shall activate within six inches of the pump-on level or higher as needed…" So , put it anywhere basically.		Chad Gambill, Caldwell County Health Dept, 10/31/2017	Agree and language has been modified
.1103	94	20	Should "lap pump float switch" be "override float"?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Either term is appropriate. Will keep lag float.
.1103	94	26	End sentence after "be audible and visible"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Understand comment, but will keep language as is currently written.
.1103	94	27	Insert "and" between "device" and "shall"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree with modification
.1103	94	30	"remain operable whenever the pump or pump circuit is inoperable" Is the pump circuit defined? Is it only from the closest protective device or is it the complete circuit from the main SEP? We have had problems with GFCI breakers in the main SEP that feed the control panels that have separate breakers for the pump and alarm. Would this be disallowed by this rule and require separate breakers in the Main SEP?		Chad Gambill, Caldwell County Health Dept, 10/31/2017	Pump circuit is not defined in our rules. Have modified language to make simpler.
.1104	95	17	"cast iron"	Strike. No. Just no.	Joe Soulia, Orenco Systems, 10/31/2017	Disagree. Still have cast iron siphons that are operational.
.1104	95	17	"cast iron"	Strike. No. Just no.	Steve Barry, AQWA, 10/31/2017	Disagree. Still have cast iron siphons that are operational.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1104	95	19	"...functioning high water alarm..."	"functioning trip counter and high water alarm..." We use ETM's and cT's on control panels for troubleshooting and control. Why not have the same control on dosing siphons? Don't you want to know how many times it has dosed since your last inspection??	Joe Soulia, Orenco Systems, 10/31/2017	Agree
.1104	95	19	"...functioning high water alarm..."	"functioning trip counter and high water alarm..." We use ETM's and cT's on control panels for troubleshooting and control. Why not have the same control on dosing siphons? Don't you want to know how many times it has dosed since your last inspection??	Steve Barry, AQWA, 10/31/2017	Agree
.1105	95	35	Timed dosing is used for flow equalization for treatment systems as well as for field disposal systems. The language as written is applicable only to field dosing systems.	Recommend revising rule as follows to identify the application to field dosing systems: "The timed field dosing system shall be ……"	Bill Fenner, Aquapoint, 10/29/2017	Agree, but have tried to modify language to allow for any application, but not require for all advanced pretreatment.
.1105	95	35 to 37	Recommend "controls and sensors (floats) are to be configured to assure the minimum dose is available prior to initiating a dosing cycle to the dispersal field and to provide that a full dose is delivered.		Tom Ashton, American Manufacturing Company, 10/31/2017	Agree
.1106	96	7	"Two feet of residual pressure head"….can we not specify PH higher than 2'? Sometimes to meet the force main scour velocity on manifolds with only 2 or 3 taps higher PH is needed.		Chad Gambill, Caldwell County Health Dept, 10/31/2017	Agree
.1106	96	9	Would like to see this as "minimum of 2 feet of pressure head" instead of an absolute. One size does not fit all. I have encountered circumstances on oddly-shaped sites utilizing more than one manifold where a slightly higher head in one manifold was needed to balance flows among lines of different lengths across the entire system. And on retrofits, repairs, or other circumstances where the supply line diameter is unusual, higher heads might be desirable in order to maintain adequate scour velocity.		Kathy Morris, Agri-Waste Technology, Inc, 10/30/2017	Agree
.1106	96	17	WHAT IS THE DEFINITION OF A "DISSIPATOR BOX" AND THE PROPOSED DIMENSIONS. THE PROPOSED RULE SAYS "MAY" BE USED, AND IT STATES THAT AN "AUTHORIZED AGENT" MAY APPROVE THE USE. WHO IS THE AUTHORIZED AGENT, THE LHD OR THE DESIGNER OR ENGINEER?	FURTHER EXPLAIN THE SIZE AND FEATURES OF A COMPONENT, OR INCLUDE A STANDARD DISTRIBUTION BOX AS FULFILLING THE PERFORMANCE OF DISSIPATION.	Doug Lassiter, NCSTA, 10/24/2017	Agree. Simplified language to reflect approved use of distribution boxes in this configuration.
.1106	96	17	"Dissipator box" is new terminology. Approximate shape size recommendation		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree. Simplified language to reflect approved use of distribution boxes in this configuration.
.1106	96	17	Dissipator box	I have no idea what is intended … What exactly is a dissipator box? Is plywood a viable construction material? See what i mean? Needs a definition.	Joe Soulia, Orenco Systems, 10/31/2017	Agree. Simplified language to reflect approved use of distribution boxes in this configuration.
.1106	96	17	Dissipator box	I have no idea what is intended … What exactly is a dissipator box? Is plywood a viable construction material? See what i mean? Needs a definition.	Steve Barry, AQWA, 10/31/2017	Agree. Simplified language to reflect approved use of distribution boxes in this configuration.
.1201	96	36	The standard for Total Nitrogen for TS-II of 20 mg/l may be unattainable with the higher influent TKN values seen from DSE sources without complicated additional processes. The reduction of nitrogen is an important goal and should be incorporated into rules but setting a target that can't be reached is counter-productive.	Recommend the following tiered standard be incorporated into the TS-II standard for total nitrogen (TN): 0 – 3,000 gpd; TN < 30 mg/l 3,001 – 10,000 gpd; TN < 20 mg/l >10,001 gpd; TN < 10 mg/l	Bill Fenner, Aquapoint, 10/29/2017	Agree with modifications

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1201	96	36	The standard for Fecal Coliform limits does not appear to be necessary for subsurface discharge systems with advanced pretreatment. Studies confirm the movement of pathogens through unsaturated soils is measured in centimeters. In fact, the first paragraph of the new Subchapter 18E rules states that the scope of the rules is that "The wastewater system shall be designed to not discharge effluent to the land surface, surface waters, or directly to groundwater". Soil investigations are required that are specifically targeted at placing discharge systems in unsaturated conditions which makes the need for disinfection moot. (also see sec .1303(a)(1)). It is interesting to note that only systems that are managed by certified operators, visited on a specified schedule, have alarms with automatic notifications, and have sampling requirements have a fecal limitation imposed but the systems that do not have all that attention do not. The inclusion of a fecal limitation imposes additional installation and maintenance costs to the owner but provide very little benefit to the public or environment. For these reasons please consider deleting the Fecal Coliform limits from Table XXIV for both TS-I and TS-II systems.		Bill Fenner, Aquapoint, 10/29/2017	Agree with modifications. We have proposed a method to reduce sampling for Fecal Coliform upon a showing of compliance with the effluent standards.
.1201	96	36	The total nitrogen limit was changed from 30 mg/L in the previous draft to 20 mg/L. Influent TKN values have increased, now are up to 60 to 70 mg/L, and the system cannot meet 20 mg/L total nitrogen in the effluent. Additional cost would need to be incurred for all systems to meet this standard.	Stagger the effluent limits based on design flow: up to 3,000 gpd, TN < 30 mg/L; 3,001 to 10,000 gpd, TN < 20 mg/L; greater than 10,000 gpd, TN < 10 mg/L	Bill Fenner, Aquapoint, 9/20/2017	Agree with modifications
.1201	96	36	Agree with Steve Barry's comments regarding reuse, conjunctive use permits in 18E. Setbacks should be discussed, reductions should be allowed, effluent quality with drip and without drip discussed, etc.		Bill Fenner, Aquapoint, 10/2/2017	Agree with adding reclaimed water to the proposed rules. Reclaimed water has been added to Rule .1002.
.1201	96	36	Agree with Steve and Bill on nitrogen. Nitrogen loading is a concern, especially with rapidly permeable soils.		Bob Rubin, NCSU, 10/4/2017	Agree
.1201	96	36	.1201 advanced pretreatment system standards: Table XXIV should be expanded to include wastewater pretreatment devices capable of achieving reclaimed water standards as defined in NCAC .02U Rule, NSF 350, and as discussed in SB 163 for reclaimed water systems. Utilization of these high levels of treatment should be addressed in these rules to allow reductions in buffer requirements (.0601) and indoor reuse as listed in the ICC Building Code (chapter 7 and 9) and as accepted in NC Plumbing Code.		Bob Rubin, NCSU, 10/26/2017	Agree with adding reclaimed water to the proposed rules. Reclaimed water has been added to Rule .1002.
.1201	96	36	Show reuse standard on table, consider merging TS-I and TS-II with existing TS-II setbacks, 0 setbacks for reuse quality		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree with adding reclaimed water to the proposed rules. Reclaimed water has been added to Rule .1002.
.1201	96	36	Increase TN from 20 mg/L to 30 mg/L		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.1201	96	36	Effluent Nitrogen is too low	A decade+ of experience and data shows that influent total nitrogen concentrations are in reality higher than many textbook values. The attached curve shows that the median TKN for influent is approx. 64 mg/l and an 80% confidence point is 92 mg/l. These technologies were approved and can generally only meet 60% nitrogen reduction without additional technology, chemicals, and possibly tanks. Recommend changing the effluent total nitrogen limits to <30 mg/l for flows <3000 GPD and <20 for flows greater than 3,000 GPD.	Joe Soulia, Orenco Systems, 10/31/2017	Agree

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1201	96	36	Fecal Coliform limit on a subsurface system makes very little sense and is costly and time consuming and mandated without any significant allowances granted.	Simply strike all fecal coliform standards from Table XXIV. Recent research shows that conventional soil systems with a unsaturated soil depth of only 12" struggle to remove fecal coliforms reliably. Therefore, unless the depth to soil wetness is increased for conventional systems there is no justification to impose additional disinfection on treatment systems. We are increasing the cost of equipment as well as the cost of laboratory fees for no justifiable reason. Unless we begin applying wastewater to the land surface, I see no reason to continue disinfecting the effluent UNLESS additional vertical setback or sizing allowances are offered. (see below)	Joe Soulia, Orenco Systems, 10/31/2017	Agree with modifications. We have proposed a method to reduce sampling for Fecal Coliform upon a showing of compliance with the effluent standards.
.1201	96	36	A member of our staff attended the hearing held in Raleigh on October 2, 2016 for the revised onsite wastewater regulations. He has reported that some manufacturers of small wastewater treatment systems testified and asked for more lenient total nitrogen standards. We wish to be put on record as opposed to more lenient nitrogen standards than those proposed in the draft regulations. In fact, we feel what is being proposed is quite lenient when compared to many other states. The following are some but not necessarily all of the reasons why we feel more lenient nitrogen standards make no sense for North Carolina: 1. North Carolina has many coastal embayments. The biggest threat to coastal embayments is nitrogen contamination. Much of the state's ground water eventually migrates into the coastal embayments. 2. Twenty milligrams per liter of nitrogen is a very lenient standard and attainable by most quality secondary treatment systems with properly controlled recycle. True biological nutrient removal systems such as ours are not necessary for 20 mg./L. We would prefer to see a limit of 14 mg/L. as NJ does or even < 10 mg/L as is often required by several states.		Keith Dobie, Benjamin O. Paine Company, 10/5/2017	Understand and agree with your comment. We would like to be able to reduce the nitrogen levels, but at this time it is not supported by industry and the data that has been submitted to the Branch from some advanced pretreatment manufacturers. We want to try and be realistic about what nitrogen treatment standard the majority of systems can meet.
.1201	96	36	3. From a commercial point of view raising the limit puts the poorer performing systems on an equal footing with the better systems. The better systems, in general, now cost no more than the poorer performing ones, so if the nitrogen standards are loosened the environment and the public loses and a few inferior manufacturers gain. 4. We believe the state of North Carolina should be challenging manufacturers of onsite wastewater treatment systems to constantly produce better systems, embrace new ideas and not work to maintain the status quo and in this case certainly not go backwards.		Keith Dobie, Benjamin O. Paine Company, 10/5/2017	Understand and agree with your comment. We would like to be able to reduce the nitrogen levels, but at this time it is not supported by industry and the data that has been submitted to the Branch from some advanced pretreatment manufacturers. We want to try and be realistic about what nitrogen treatment standard the majority of systems can meet.
.1201	96	36	The table lists TN reduction for TS-II as ≤20 mg/L. This table in a previous version listed the TS-II TN effluent quality standard as ≤20 mg/L or >60% removal. Please clarify why the "or >60% removal" statement was removed.		Sheryl Ervin, Bio-Microbics, Inc, 10/31/2017	The percent reduction was removed because a number of the advanced pretreatment systems recycle back to a recirculation tank or the septic tank and it was difficult to get a clear determination of 60% removal from the wastewater entering the advanced pretreatment unit. Also, by having a single standard, and raising it, we are hoping to simplify the standard.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1201	96	36	Effluent Nitrogen is too low	A decade+ of experience and data shows that influent total nitrogen concentrations are in reality higher than many textbook values. The attached curve shows that the median TKN for influent is approx. 64 mg/l and an 80% confidence point is 92 mg/l. These technologies were approved and can generally only meet 60% nitrogen reduction without additional technology, chemicals, and possibly tanks. Recommend changing the effluent total nitrogen limits to <30 mg/l for flows <3000 GPD and <20 for flows greater than 3,000 GPD.	Steve Barry, AQWA, 10/31/2017	Agree
.1201	96	36	Agree with Bill Fenner's proposal from the Greenville listening meeting regarding treatment standards and flow rates.		Steve Barry, AQWA, 10/2/2017	Agree
.1201	96	36	Agree with Wake County's comments regarding reuse, conjunctive use permits in 18E. Setbacks should be discussed, reductions should be allowed, effluent quality with drip and without drip discussed, etc.		Steve Barry, AQWA, 10/2/2017	Agree with adding reclaimed water to the proposed rules. Reclaimed water has been added to Rule .1002.
.1201	96	36	Fecal Coliform limit on a subsurface system makes very little sense and is costly and time consuming and mandated without any significant allowances granted.	Simply strike all fecal coliform standards from Table XXIV. Recent research shows that conventional soil systems with a unsaturated soil depth of only 12" struggle to remove fecal coliforms reliably. Therefore, unless the depth to soil wetness is increased for conventional systems there is no justification to impose additional disinfection on treatment systems. We are increasing the cost of equipment as well as the cost of laboratory fees for no justifiable reason. Unless we begin applying wastewater to the land surface, I see no reason to continue disinfecting the effluent UNLESS additional vertical setback or sizing allowances are offered. (see below)	Steve Barry, AQWA, 10/31/2017	Agree with modifications. We have proposed a method to reduce sampling for Fecal Coliform upon a showing of compliance with the effluent standards.
.1202	97		There is no consideration for the minimum vertical separation between NSF 40, TS 1and TS2. TS1 and TS2 has no advantage to the to LC and SWC, if it is 12 for TS 1 then it is 12 for TS 2. IF it is 9 for TS1 it is 9 for TS 2. TS 2 should be 6''.		Mike Stidham, E-Z Treat, 10/31/2017	Disagree. The design criteria for fill systems is based on fill systems/mound systems that were installed in North Carolina a number of years ago. Based on the experience with these systems, the conservative design criteria for fill systems was developed. These are the same provisions that are in the current .1970 rule as they apply to new and existing fill. We have no basis to alter this design criteria without additional substantiating data.
.1201	97		Break out Total Nitrogen (TN) as an add-on parameter, not specific to just TS-II. This will allow for further utilization of nitrogen reduction technologies, which is better for the public health and the environment.		Colin Bishop, Anua, 10/31/2017	Understand the concept, but at this point in the treatment standard process I don't know how we would justify this.
.1201	97		For TS-II systems, the current rules state the Advanced Treatment System shall meet a Total Nitrogen (TN) of less than or equal to 20 mg/l or a reduction of > 60 percent. The proposed Rules eliminate the 60% reduction. Enforcement of the current rule is not being exercised consistently. The Advantex Innovative approval has not met the standard since July of 2007, leaving subjective enforce by the section.		Mike Stidham, E-Z Treat, 10/31/2017	Disagree. The percent reduction was removed because a number of the advanced pretreatment systems recycle back to a recirculation tank or the septic tank and it was difficult to get a clear determination of 60% removal from the wastewater entering the advanced pretreatment unit. Also, but having a single standard, and raising it, we are hoping to simplify the standard. The Branch is also working to improve its enforcement process for these standards.
.1201	97	15 to 19	Item (b) states "Only one of the following modifications to system siting and sizing criteria may be approved, unless otherwise identified in this Rule: o With an appropriate treatment level, both items "(1) reduction in depth to limiting condition and vertical separation distance;" and "(2) setback reduction are appropriate" should both be allowable conditions at the same time.		Sheryl Ervin, Bio-Microbics, Inc, 10/31/2017	Disagree. Advanced pretreatment is allowing you to overcome one site or sizing limitation, not all siting or sizing limitations.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1201	97	17 to 19	(d) When using advanced treatment systems, one of the following modifications to system siting and sizing criteria may be approved pursuant to Rules of this Section:	Change the word "one" to all. RE: Change "one" to "all".	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. Advanced pretreatment is allowing you to overcome one site or sizing limitation, not all siting or sizing limitations.
.1202	98		Vertical Separation Requirements for Fill Systems The benefits listed in the table for TS-II treatment are identical to those for TS-I treatment. TS-II requires an additional 33% removal rate of BOD and TSS, a thousand fold reduction of fecal coliform plus requires denitrification process. The benefits in the required vertical separation should be reduced by 3 inches (as listed in Table XXV) to account for the additional treatment being provided.		Bill Fenner, Aquapoint, 10/29/2017	Disagree. The design criteria for fill systems is based on fill systems/mound systems that were installed in North Carolina a number of years ago. Based on the experience with these systems, the conservative design criteria for fill systems was developed. These are the same provisions that are in the current .1970 rule as they apply to new and existing fill. We have no basis to alter this design criteria without additional substantiating data.
.1202	98		The right hand column for TSII effluent should be 12,9,9,9 for depth from soil surface	We grant horizontal setback reductions for TS-II systems as compared to TS-I systems, why are we not granting reduced vertical separation? As compared to TSI systems, TSII systems provide for an additional log removal of fecal coliforms, significant nitrogen removal, and 33% additional organic load onto the infiltrative surface area. Not only is it not right to grant these technologies more lenient vertical allowance, due to the nutrient and fecal reduction we should want to encourage their use. Time dosing provides an added layer of protection as well. In summary, we are granting a 25% decrease in vertical separation to TSII systems over TSI systems in exchange for 60% less nitrogen load, 33% less organic load, a 10 fold decrease in fecal coliform, and gaining time dosing of the drainfield. It's protective, and it's fair.	Joe Soulia, Orenco Systems, 10/31/2017	Disagree. The design criteria for fill systems is based on fill systems/mound systems that were installed in North Carolina a number of years ago. Based on the experience with these systems, the conservative design criteria for fill systems was developed. These are the same provisions that are in the current .1970 rule as they apply to new and existing fill. We have no basis to alter this design criteria without additional substantiating data.
.1202	98		The right hand column for TSII effluent should be 15,12,9,6,9,6	We grant horizontal setback reductions for TS-II systems as compared to TS-I systems, why are we not granting reduced vertical separation? As compared to TSI systems, TSII systems provide for an additional log removal of fecal coliforms, significant nitrogen removal, and 33% additional organic load onto the infiltrative surface area. Not only is it not right to grant these technologies more lenient vertical allowance, due to the nutrient and fecal reduction we should want to encourage their use. Time dosing provides an added layer of protection as well. In summary, we are granting a 25% decrease in vertical separation to TSII systems over TSI systems in exchange for 60% less nitrogen load, 33% less organic load, a 10 fold decrease in fecal coliform, and gaining time dosing of the drainfield. It's protective, and it's fair.	Joe Soulia, Orenco Systems, 10/31/2017	Disagree. The design criteria for fill systems is based on fill systems/mound systems that were installed in North Carolina a number of years ago. Based on the experience with these systems, the conservative design criteria for fill systems was developed. These are the same provisions that are in the current .1970 rule as they apply to new and existing fill. We have no basis to alter this design criteria without additional substantiating data.
.1202	98		Table XXII. Minimum usable soil depth and vertical separation to SWC* or USC** for systems 1,500 /Gives advantages to LPP over gravity	All advantages given should be based on effluent quality not disposal method. CH/RE: Change language or replace.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. Advantages are already given to using advanced pretreatment over no advanced pretreatment or just pressure dispersal. This gives an advantage to advanced pretreatment with pressure dispersal, which is a step above just advanced pretreatment.
.1202	98		Table XXIII. Minimum usable soil depth and vertical separation to SWC* or USC** for systems less than or equal to 1500 gallons per day/Gives advantages to LPP over gravity	All advantages given should be based on effluent quality not disposal method. CH/RE: Change language or replace.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. Advantages are already given to using advanced pretreatment over no advanced pretreatment or just pressure dispersal. This gives an advantage to advanced pretreatment with pressure dispersal, which is a step above just advanced pretreatment.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1202	98		The Tables appear to remain consistent with each other, even with the added treatment to the effluent of TS-I and TS-II standards, especially with New Fill minimum vertical separation.		Mike Stidham, E-Z Treat, 10/31/2017	Disagree. The design criteria for fill systems is based on fill systems/mound systems that were installed in North Carolina a number of years ago. Based on the experience with these systems, the conservative design criteria for fill systems was developed. These are the same provisions that are in the current .1970 rule as they apply to new and existing fill. We have no basis to alter this design criteria without additional substantiating data.
.1202	98		The right hand column for TSII effluent should be 12,9,9,9 for depth from soil surface	We grant horizontal setback reductions for TS-II systems as compared to TS-I systems, why are we not granting reduced vertical separation? As compared to TSI systems, TSII systems provide for an additional log removal of fecal coliforms, significant nitrogen removal, and 33% additional organic load onto the infiltrative surface area. Not only is it not right to grant these technologies more lenient vertical allowance, due to the nutrient and fecal reduction we should want to encourage their use. Time dosing provides an added layer of protection as well. In summary, we are granting a 25% decrease in vertical separation to TSII systems over TSI systems in exchange for 60% less nitrogen load, 33% less organic load, a 10 fold decrease in fecal coliform, and gaining time dosing of the drainfield. It's protective, and it's fair.	Steve Barry, AQWA, 10/31/2017	Disagree. The design criteria for fill systems is based on fill systems/mound systems that were installed in North Carolina a number of years ago. Based on the experience with these systems, the conservative design criteria for fill systems was developed. These are the same provisions that are in the current .1970 rule as they apply to new and existing fill. We have no basis to alter this design criteria without additional substantiating data.
.1202	98		The right hand column for TSII effluent should be 15,12,9,6,9,6	We grant horizontal setback reductions for TS-II systems as compared to TS-I systems, why are we not granting reduced vertical separation? As compared to TSI systems, TSII systems provide for an additional log removal of fecal coliforms, significant nitrogen removal, and 33% additional organic load onto the infiltrative surface area. Not only is it not right to grant these technologies more lenient vertical allowance, due to the nutrient and fecal reduction we should want to encourage their use. Time dosing provides an added layer of protection as well. In summary, we are granting a 25% decrease in vertical separation to TSII systems over TSI systems in exchange for 60% less nitrogen load, 33% less organic load, a 10 fold decrease in fecal coliform, and gaining time dosing of the drainfield. It's protective, and it's fair.	Steve Barry, AQWA, 10/31/2017	Disagree. The design criteria for fill systems is based on fill systems/mound systems that were installed in North Carolina a number of years ago. Based on the experience with these systems, the conservative design criteria for fill systems was developed. These are the same provisions that are in the current .1970 rule as they apply to new and existing fill. We have no basis to alter this design criteria without additional substantiating data.
.1202	98	4	In Table XXVI, there is no different between TS-I and TS-II vertical separation and minimum depth under 1,500 gpd.	Should be a difference with the added level of TS-II	Bill Fenner, Aquapoint, 9/20/2017	Disagree. The design criteria for fill systems is based on fill systems/mound systems that were installed in North Carolina a number of years ago. Based on the experience with these systems, the conservative design criteria for fill systems was developed. These are the same provisions that are in the current .1970 rule as they apply to new and existing fill. We have no basis to alter this design criteria without additional substantiating data.
.1202	99	4	For when the LTAR can be modified, is this an "and" or "or" list	Clarify	Bill Fenner, Aquapoint, 9/20/2017	Should be an "and". However, paragraph has been reworked to make things clearer.
.1202	99	4	Item (d) states “The LTAR may be modified when the following criteria are met” with seven (7) criteria defined. Item (6) line 27 end with “and” indicating all 7 criteria must be met before the LTAR may be modified. This should be changed to “or”.		Sheryl Ervin, Bio-Microbics, Inc, 10/31/2017	Disagree. However, paragraph has been reworked to make things clearer.

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.1202	99	4	Item (d)(7) should not be included in this list. The criteria address design daily flow rather than the LTAR.		Sheryl Ervin, Bio-Microbics, Inc, 10/31/2017	Disagree. Once an operation permit has been issued, and a system has been placed into use, it is very difficult to determine trench biomat, the natural soil structure and characteristics, and other site parameters that are used to determine LTAR. To try and test the existing system would be destructive and could potentially cause the existing system to fail.
.1202	99	10	4) Pressure dispersal shall be utilized.	Broaden the rule language to incorporate other methods of disposal. CH/AD: remove the "pressure dispersal" reference and broaden the regulations to include other methods of wastewater distribution. The language used should allow for other disposal options beside just pressure dispersal.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. Advanced pretreatment with pressure dispersal optimizes the wastewater system design for very limited sites or when greater advantages are provided. There are many options for effluent distribution other than pressure dispersal with advanced pretreatment that still use reduced siting and sizing criteria.
.1202	99	11	The LTAR increase for TS-II systems should be by a factor of 2.5 when supported by the required Special Site Evaluation and when pressure distribution and time dosing is used. The conditions listed in (A), (B), (C) are not needed. The additional treatment provided by TS-II systems (listed above) justifies this LTAR increase in all soils when supported by the SSE.		Bill Fenner, Aquapoint, 10/29/2017	Disagree. The previous Paragraph allows for all Soil Groups to increase the LTAR by up to a factor of two. Increasing that factor would only further impact limited sites with marginal soils.
.1202	99	13	"...new system using DSE and all the following conditions are met:"	"...new system using DSE when pressure distribution and time dosing is utilized." As compared to TSI systems, TSII systems provide for an additional log removal of fecal coliforms, significant nitrogen removal, and 33% additional organic load onto the infiltrative surface area. Not only is it not right to grant these technologies more lenient sizing, due to the nutrient and fecal reduction we should want to encourage their use. Time dosing provides an added layer of protection as well. In summary, we are granting a 25% increase in loading rate to TSII systems over TSI systems in exchange for 60% less nitrogen load, 33% less organic load, a 10 fold decrease in fecal coliform, and gaining time dosing of the drainfield. It's protective, and it's fair.	Joe Soulia, Orenco Systems, 10/31/2017	Disagree. The previous Paragraph allows for all Soil Groups to increase the LTAR by up to a factor of two. Increasing that factor would only further impact limited sites with marginal soils.
.1202	99	13	"...new system using DSE and all the following conditions are met:"	"...new system using DSE when pressure distribution and time dosing is utilized." As compared to TSI systems, TSII systems provide for an additional log removal of fecal coliforms, significant nitrogen removal, and 33% additional organic load onto the infiltrative surface area. Not only is it not right to grant these technologies more lenient sizing, due to the nutrient and fecal reduction we should want to encourage their use. Time dosing provides an added layer of protection as well. In summary, we are granting a 25% increase in loading rate to TSII systems over TSI systems in exchange for 60% less nitrogen load, 33% less organic load, a 10 fold decrease in fecal coliform, and gaining time dosing of the drainfield. It's protective, and it's fair.	Steve Barry, AQWA, 10/31/2017	Disagree. The previous Paragraph allows for all Soil Groups to increase the LTAR by up to a factor of two. Increasing that factor would only further impact limited sites with marginal soils.
.1202	99	14 to 17	conditions…	strike them. see above.	Joe Soulia, Orenco Systems, 10/31/2017	Disagree. The previous Paragraph allows for all Soil Groups to increase the LTAR by up to a factor of two. Increasing that factor would only further impact limited sites with marginal soils.
.1202	99	14 to 17	conditions…	strike them. see above.	Steve Barry, AQWA, 10/31/2017	Disagree. The previous Paragraph allows for all Soil Groups to increase the LTAR by up to a factor of two. Increasing that factor would only further impact limited sites with marginal soils.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1202	99	17	4) Pressure dispersal shall be utilized.	Broaden the rule language to incorporate other methods of disposal. CH/AD: remove the "pressure dispersal" reference and broaden the regulations to include other methods of wastewater distribution. The language used should allow for other disposal options beside just pressure dispersal.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. Advanced pretreatment with pressure dispersal optimizes the wastewater system design for very limited sites or when greater advantages are provided. There are many options for effluent distribution other than pressure dispersal with advanced pretreatment that still use reduced siting and sizing criteria.
.1202	99	28	Adding pretreatment to an existing system provides a significant improvement to the discharge effluent and should provide a benefit to the owner.	Recommend revising the rule by adding the following to the end of the sentence: "… without a hydraulic and organic loading analysis demonstrating the increase in flow will not overload the existing system."	Bill Fenner, Aquapoint, 10/29/2017	Disagree. Once an operation permit has been issued, and a system has been placed into use, it is very difficult to determine trench biomat, the natural soil structure and characteristics, and other site parameters that are used to determine LTAR. To try and test the existing system would be destructive and could potentially cause the existing system to fail.
.1202	99	28	Do not understand what is meant by this paragraph.	Clarify	Bill Fenner, Aquapoint, 9/20/2017	Disagree. Once an operation permit has been issued, and a system has been placed into use, it is very difficult to determine trench biomat, the natural soil structure and characteristics, and other site parameters that are used to determine LTAR. To try and test the existing system would be destructive and could potentially cause the existing system to fail.
.1202	99	28	"Design daily flow shall not..."	Strike it all. If a 3 BR property owner wants to build 2 more bedrooms onto his home, he should absolutely be allowed to install a treatment system in order to increase the LTAR and not have to expand his drainfield. The environment is protected. Organic mass load will be decreased by 95% or more with approved treatment systems. We should not be prohibiting this action by the owner, we should be applauding it.	Joe Soulia, Orenco Systems, 10/31/2017	Disagree. Once an operation permit has been issued, and a system has been placed into use, it is very difficult to determine trench biomat, the natural soil structure and characteristics, and other site parameters that are used to determine LTAR. To try and test the existing system would be destructive and could potentially cause the existing system to fail.
.1202	99	28	LTAR shall not be increased when advanced treatment is added to an existing wastewater system.	Rule should be written to encourage the use of advanced treatment. CH/RE: Change language or replace.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. Once an operation permit has been issued, and a system has been placed into use, it is very difficult to determine trench biomat, the natural soil structure and characteristics, and other site parameters that are used to determine LTAR. To try and test the existing system would be destructive and could potentially cause the existing system to fail.
.1202	99	28	"Design daily flow shall not..."	Strike it all. If a 3 BR property owner wants to build 2 more bedrooms onto his home, he should absolutely be allowed to install a treatment system in order to increase the LTAR and not have to expand his drainfield. The environment is protected. Organic mass load will be decreased by 95% or more with approved treatment systems. We should not be prohibiting this action by the owner, we should be applauding it.	Steve Barry, AQWA, 10/31/2017	Disagree. Once an operation permit has been issued, and a system has been placed into use, it is very difficult to determine trench biomat, the natural soil structure and characteristics, and other site parameters that are used to determine LTAR. To try and test the existing system would be destructive and could potentially cause the existing system to fail.
.1202	100		Table - define detention basin and retention basin		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. These are common stormwater terms and we do not need to define them.
.1203	101	1 to 18	Items (b)(1-3). Please review this section with respect to page 53 Item (b) as these sections may contradict each other.		Sheryl Ervin, Bio-Microbics, Inc, 10/31/2017	Paragraph has been modified based on comments.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1203	101	13	15A NCAC 18E .1205 Pressure dispersal shall be utilized.	Pressure dispersal should not be the only option. The rule should be broadened to encourage innovation and the use of other disposal methods. CH/RE: Change language or replace.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. Advanced pretreatment with pressure dispersal optimizes the wastewater system design for very limited sites or when greater advantages are provided. There are many options for effluent distribution other than pressure dispersal with advanced pretreatment that still use reduced siting and sizing criteria.
.1203	101	21	Wake County does not support double dipping		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.1203	101	21	Max reduction including PIA products use reduction shall be 50% of conventional system (conflicts with LTAR of 2.5?)		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. However, language has been modified to match language in other parts of the proposed rules.
.1203	101	23	shall not be reduced by more than 50 percent when compared to a conventional wastewater system.	Rule should not limit the reduction limit without knowing what technology is to be used. Rule should not limit innovation. Change language.	Lee Rashkin, Presby Environmental, 10/31/2017	Language has been modified to match language in other parts of the proposed rules.
.1203	101	25	Technically??		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Once an operation permit has been issued, and a system has been placed into use, it is very difficult to determine trench biomat, the natural soil structure and characteristics, and other site parameters that are used to determine LTAR. To try and test the existing system would be destructive and could potentially cause the existing system to fail.
.1203	101	25	"Design daily flow shall not..."	Strike it all. If a 3 BR property owner wants to build 2 more bedrooms onto his home, he should absolutely be allowed to install a treatment system in order to increase the LTAR and not have to expand his drainfield. The environment is protected. Organic mass load will be decreased by 95% or more with approved treatment systems. We should not be prohibiting this action by the owner, we should be applauding it.	Joe Soulia, Orenco Systems, 10/31/2017	Disagree. Once an operation permit has been issued, and a system has been placed into use, it is very difficult to determine trench biomat, the natural soil structure and characteristics, and other site parameters that are used to determine LTAR. To try and test the existing system would be destructive and could potentially cause the existing system to fail.
.1203	101	25	LTAR shall not be increased when advanced treatment is added to an existing wastewater system.	Rule should be written to encourage the use of advanced treatment. CH/RE: Change language or replace.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. Once an operation permit has been issued, and a system has been placed into use, it is very difficult to determine trench biomat, the natural soil structure and characteristics, and other site parameters that are used to determine LTAR. To try and test the existing system would be destructive and could potentially cause the existing system to fail.
.1203	101	25	"Design daily flow shall not..."	Strike it all. If a 3 BR property owner wants to build 2 more bedrooms onto his home, he should absolutely be allowed to install a treatment system in order to increase the LTAR and not have to expand his drainfield. The environment is protected. Organic mass load will be decreased by 95% or more with approved treatment systems. We should not be prohibiting this action by the owner, we should be applauding it.	Steve Barry, AQWA, 10/31/2017	Disagree. Once an operation permit has been issued, and a system has been placed into use, it is very difficult to determine trench biomat, the natural soil structure and characteristics, and other site parameters that are used to determine LTAR. To try and test the existing system would be destructive and could potentially cause the existing system to fail.
.1204	101 to 106		This Section (.1204) appears to allow little adjustment to justify the cost to the consumer to use an advanced treatment system. There is no allotment for a TS 2 system for vertical separation. There is no advantage for a TS 2 system.		Mike Stidham, E-Z Treat, 10/31/2017	Disagree. TS-II systems can get a vertical separation reduction to 6 inches. In addition to that, if they utilize drip irrigation, the loading rates have been adjusted to account for advanced pretreatment when compared to a conventional system using DSE.
.1204	103	9 to 10	TABLE XXVII Under Group IV Soils, NSF-49 the LATAR range is shown to be .05 to .15 gal/ft2/d. The maximum should be .2 gal/ft2/d. See Table XXII on page 84, specific to DDS DRIP DISPERSAL SYSTEMS, the maximum loading rate in this category is .2 gal/ft2/d		Tom Ashton, American Manufacturing Company, 10/31/2017	Agree

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.1205	106	36	Pressure dispersal shall be utilized.	Pressure dispersal should not be the only option. The rule should be broadened to encourage innovation and the use of other disposal methods. CH/RE: Change language or replace.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. Advanced pretreatment with pressure dispersal optimizes the wastewater system design for very limited sites or when greater advantages are provided. There are many options for effluent distribution other than pressure dispersal with advanced pretreatment that still use reduced siting and sizing criteria.
.1206	107	27	on sites with a design flow not to exceed 600 gallons per day may be permitted	Bed systems shall be limited to 600 gallons per day design daily flow. What is the basis for 600 gpd? The flow and linear footage requirements throughout the rules are random and appear to be arbitrary. Simplify the rules by establishing one standard. CH: Simplify the rules by establishing one standard for flow and linear footage requirements.	Lee Rashkin, Presby Environmental, 10/31/2017	The 600 gpd design daily flow is based on the maximum design daily flow allowed for DSE bed systems. The Branch has heard your comments about about trying to consolidate the variety of design daily flows down to a minimum, and has worked to do that. Unfortunately, not all systems are equal and can be treated the same. Bed systems are one of those systems that are treated a little bit differently. The differences in trench width and length are based on different products specified in the rules and approvals. Just like not all sites are the same, not all products are the same and they should not be required to all be exactly the same trench width, etc.
.1206	108	3 to 5	15A NCAC 18E .1208 On sites where the soil texture is Group I or II the LTAR may be increased by a factor of 1.125, with no further reduction in bed size allowed	Reference 15A NCAC 18A.1957(c)(5)© The LTAR for ATUs may be increased 25percent for Group I or Group II soils. CH: Why are the LTAR recommendations from Reference 15A not being adhered to for ATU's like the other products. It appears that ATU's are being held to a stricter standard. Why?	Lee Rashkin, Presby Environmental, 10/31/2017	A wastewater system using an ATU does not get as many siting and sizing considerations as a system meeting TS-I or TS-II. As the effluent quality improves, the system can be used on more restrictive sites. ATU manufactuers can apply for approval as an ATU or a PIA approval. The PIA approval encompasses systems meeting TS-I and TS-II effluent quality standards.
.1206	108	18 to 19	In no case shall the slope exceed 10 percent.	Increase the percent slope allowed. CH: 25% slope limit is recommended for a bed utilizing treatment.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. Installing a level bed on a site with a slope greater than 10% is very, very difficult. The bottom of the bed must be level or the effluent will drain to the lowest point in the bed system and eventually surface. If the bed is not installed level, there is nothing to stop the effluent from continuously draining to the lowest point. This will create a wet spot, which will eventually become a malfunction that must be repaired.
.1206	108	29	The LTAR shall not exceed 1.0 gallons per day per square foot.	Soil texture is the major soil characteristic that determines the LTAR for any given soil. CH: Base the LTAR on soil texture or other LTAR criteria. We do not recommend a one size fits all situations standard in this case.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. This is not a one size fits all situation. This criteria is for bed systems using advanced pretreatment with a design flow up to 1,500 gpd. And the LTAR is based on the soil characteristics. The limitation is to prevent hydraulic overloading of the bed.
.1206	109	1 to 5	15A NCAC 18E .1208 the bed or beds shall not be located directly beneath the treatment components, and a pressure dispersal system is utilized to distribute flow uniformly throughout the bed area;	Change language to allow for combined treatment and disposal. CH/RE: Change language or replace.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. This is for a very specific proposed reduction on bed size using advanced pretreatment with a certain set of site criteria. Manufacturer specific products always have the option to apply through the PIA process to modify the siting and sizing criteria in the rules for their specific product.
.1206	109	1 to 5	Effluent shall be distributed to the beds by a pressure dispersal system.	Pressure dispersal should not be the only option. The rule should be broadened to encourage innovation and the use of other disposal methods. CH/RE: Change language or replace.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. Advanced pretreatment with pressure dispersal optimizes the wastewater system design for very limited sites or when greater advantages are provided. There are many options for effluent distribution other than pressure dispersal with advanced pretreatment that still use reduced siting and sizing criteria.

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.1206	111	11	The design daily flow shall not exceed 480 gallons	Establish some consistency with various flow rates. CH: We recommend using 1500 gpd.	Lee Rashkin, Presby Environmental, 10/31/2017	The design daily flow limitation is based on the system being installed in existing fill. The Branch has heard your comments about about trying to consolidate the variety of design daily flows down to a minimum, and has worked to do that. Unfortunately, not all sites are equal and can be treated the same. Fill systems, both new and existing, are one of those systems that are treated a little bit differently.
.1206	111	12	pressure dispersal is used.	Pressure dispersal should not be the only option. The rule should be broadened to encourage innovation and the use of other disposal methods. CH/RE: Change language or replace.	Lee Rashkin, Presby Environmental, 10/31/2017	Disagree. Advanced pretreatment with pressure dispersal optimizes the wastewater system design for very limited sites or when greater advantages are provided. There are many options for effluent distribution other than pressure dispersal with advanced pretreatment that still use reduced siting and sizing criteria.
.1207	111	21	.1207 Compliance criteria: should reuse quality be recognized as suited for indoor uses, plumbing systems will require assurance that there are effective controls in place for backflow prevention. Further, a new section may be required titled: Site and System Compliance Criteria for Reclaimed/Reuse Pretreatment Systems.		Bob Rubin, NCSU, 10/26/2017	Agree with adding reclaimed water to the proposed rules. Reclaimed water has been added to Rule .1002.
.1300	111 to 120		This Section regarding Operation & Maintenance should be incorporated into Section .1300 Responsibilities and condensed as much as possible for logical order, efficiency, and reduce redundancy.	This Section regarding Operation & Maintenance should be incorporated into Section .1300 Responsibilities and condensed as much as possible for logical order, efficiency, and reduce redundancy.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Disagree. Operation and maintenance is a separate issue from responsibilities.
.1301	111	35	I like the Operation and Maintenance options for IIIb systems however enforcement actions must be in place for properties that do not follow requirements for inspection frequency. Also have a definition for Non-compliant system status?		Alan Clapp, LSS, 10/24/2017	Agree with concept, but trying to define a non-compliant system has proven to be very difficult.
.1301	111	35	Type IV, V and VI listed in Table XXX1, Rule .1301 are issued operations permits. I believe these should be referenced as Renewable Operations Permits provided system is assessed as operable and ownership is documented.		Bob Rubin, NCSU, 10/26/2017	Agree with concept, but we address elsewhere that these operation permits are renewable. We do not see the value in repeating this in this location.
.1301	112	14	New? Define procedure		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree with modifications. This information has been addressed in Rule .1709.
.1301	112		ALL systems (including those of Type III and under) should have at least a 5 year LHD inspection interval OR provide an inspection report from a qualified Certified Operator OR provide A point of Sale Inspection OR a pump out receipt from a licensed Septage Hauler	ALL systems (including those of Type III and under) should have at least a 5 year LHD inspection interval OR provide an inspection report from a qualified Certified Operator OR provide A point of Sale Inspection OR a pump out receipt from a licensed Septage Hauler. Are we a permanent part of the infrastructure or not? At this point in time, simply burying wastewater systems and forgetting about them is not sustainable for the long term. ALL systems should be looked at by the LHD at some time interval. Type I-III systems account for what 80-90% of the systems installed in the State? There is WAY too much risk out there to simply turn a blind eye.	Joe Soulia, Orenco Systems, 10/31/2017	We agree with the concept. At this time, however, there is not enough human resources (LHD staff and certified subsurface operators) to meet this requirement. Many LHD staff struggle to meet the inspections currently required. Adding additional inspections would at this time just add more work that could not be completed.
.1301	112		ALL systems (including those of Type III and under) should have at least a 5 year LHD inspection interval OR provide an inspection report from a qualified Certified Operator OR provide A point of Sale Inspection OR a pump out receipt from a licensed Septage Hauler	ALL systems (including those of Type III and under) should have at least a 5 year LHD inspection interval OR provide an inspection report from a qualified Certified Operator OR provide A point of Sale Inspection OR a pump out receipt from a licensed Septage Hauler. Are we a permanent part of the infrastructure or not? At this point in time, simply burying wastewater systems and forgetting about them is not sustainable for the long term. ALL systems should be looked at by the LHD at some time interval. Type I-III systems account for what 80-90% of the systems installed in the State? There is WAY too much risk out there to simply turn a blind eye.	Steve Barry, AQWA, 10/31/2017	We agree with the concept. At this time, however, there is not enough human resources (LHD staff and certified subsurface operators) to meet this requirement. Many LHD staff struggle to meet the inspections currently required. Adding additional inspections would at this time just add more work that could not be completed.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1301	113		Change IId to IIg to correspond to original IIIg innovative approval. Many counties with computer generated permits had to add IIg status to track "accepted" trench products as compared to IIa and IIc trenches and to differentiate from the IIIg innovative trench permits.		Alan Clapp, LSS, 10/24/2017	Disagree, but understand reason behind comment. We need to be able to track accepted products separately from other trench types.
.1301	113		The system classification for Type Va systems should include other attached growth systems and not be limited only to those with a fixed media. Media filters work primarily through attached growth biological processes and not physical filtration. The minimum inspection frequency should be the same for fixed and moving attached growth systems.	Recommend revising the Type Va description as follows: "Attached growth media advanced pretreatment"	Bill Fenner, Aquapoint, 10/29/2017	Agree with modifications
.1301	113		Table XXXI - What is the difference between Type Va, Vd, and VIa? All types are differentiated by flow, with different inspection frequencies? Why?		Bill Fenner, Aquapoint, 9/20/2017	Agree and have modified the rule to differentiate between these.
.1301	113		Table XXXI - The change is more stringent that the original rule, with no basis for the increased service visits between fixed media advanced pretreatment systems and RWTS. This is not warranted on systems less than 1,500 gpd.		Cory Brantley, 10/2/2017	Agree
.1301	113		Systems labeled IIIh. The proposal is to ELIMINATE the Certified Operator requirements for a Sand Lined Trench system and allow the owner to become their own Management Entity. This office is OPPOSED to this proposal. This district has been installing Sand Lined Trench Systems for almost 30 years and feel we were very instrumental in having these systems placed in the State Rules to allow for usage in all 100 counties. ARHS was one of the first to use Sand Lined trench systems, and probably has the most of any county/district in the State, with a little over 5,000 in our 7 counties at this date. ARHS has been monitoring and inspecting these systems since the early 90's and feel that these systems should CONTINUE to require a YEARLY inspection by either the Management Entity or the LHD acting as the Management Entity. This was required originally as a verification that these systems are properly functioning and we suggest that this inspection continue. We feel that the removal of the inspection requirement may lead to future problems and give these systems a BAD REPUTATION, which this agency has WORKED SO HARD to overcome in the past by proving these system do work!		David Swinney, ARHS, 10/31/2017	Agree
.1301	113		REQUIREMENTS OF OPERATORS OF Va SYSTEMS (FIXED MEDIA ADVANCED PRETREATMENT VERSUS Vc RWTS SYSTEMS SHOULD BE THE SAME. THIS IS AN APPARENT ATTEMPPT TO ADD COST AND BURDEN TO A TECHNOLOGY THAT IS PROVEN IN THE INDUSTRY	KEEP BOTH THE FIXED MEDIA AND RWTS SYSTEMS OF < 1500 GPD AT TWO TIMES/YEAR.	Doug Lassiter, NCSTA, 10/24/2017	Agree
.1301	113		Table - It appears doable to group systems with operator requirement, classification, grade, sizes, etc (create groups of classifications)		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree and that is what is proposed
.1301	113		IVc to IVg?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree, should be Ivd
.1301	113		IVg - confusing with initial/repair combo		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. We believe this language is pretty straight forward.
.1301	113		Subsurface operators can be classified further within subsurface operator category?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	No

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1301	113		"VIa - Any system >3,000 GPD with mechanical ..."	"VIa - Any non fixed media system >3,000 GPD..." See Va. This is a little confusing. So is VIa activated sludge systems and Va fixed film systems? Is the intent with Va to be packed bed filter systems? Fixed media and packed bed filter are no necessarily synonymous. Fixed media might be submerged for example.	Joe Soulia, Orenco Systems, 10/31/2017	Agree and have modified the rule to differentiate between these.
.1301	113		Table XXXI - Va - 2 times a year, Vc - 4 times a year	These changes will add cost to the RWTS technologies.	NC Home Builders Assn, 10/25/2017	Agree
.1301	113		"VIa - Any system >3,000 GPD with mechanical ..."	"VIa - Any non fixed media system >3,000 GPD..." See Va. This is a little confusing. So is VIa activated sludge systems and Va fixed film systems? Is the intent with Va to be packed bed filter systems? Fixed media and packed bed filter are no necessarily synonymous. Fixed media might be submerged for example.	Steve Barry, AQWA, 10/31/2017	Agree and have modified the rule to differentiate between these.
.1301	113	24	This appears to be an attempt by the Department to add costs to RWTS technologies as they favor the fixed media advanced pretreatment systems. (Operator visits of 2/year vs 4/year)	Make this requirement consistent for the pretreatment technologies, at least of the systems of < 1,500 gpd to the 2 visits per year. Currently, in .1961, they are a Type V system along with sand filter technologies (fixed media) and are 2 times a year. If appears that the Department is attempting a backdoor hurdle against aerobic treatment and in favor of fixed media.	Doug Lassiter, NCSTA, 9/20/2017	Agree
.1301	113	24	Reporting frequency		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	The operator reporting frequency is identified in Rule .1304, operator responsibilities.
.1302	115	4	This rule requires the manufacturer of a system to be responsible for the operation and maintenance of a system they have provided after the sale of the system. With this stipulation has the state abdicated its authority to determine who can and cannot be designated to operate a manufacturer's system? Wouldn't the manufacturer have the sole responsibility to determine who represents the manufacturer as the operator? The rules already require that manufacturers train and certify operators of their systems. The classifications of system operator by the state do not include training on proprietary advanced pretreatment systems. The operator of the collection and dispersal components of a treatment system would have to hold a subsurface operator certification applicable to those components.		Bill Fenner, Aquapoint, 10/29/2017	Agree
.1302	115	4	This is the wrong approach for the sustained compliance of any system. The manufacturer should supply the owner with the list of approved certified operators for their system, and should supply an operation and maintenance manual that incorporates the requirements of their product and the Section.	Amend language as follows: "(1) Manufacturers of advanced pretreatment systems shall provide the owner with a current list of approved certified operators for the system. (2) Owners of advanced pretreatment systems shall maintain a contract with a certified O&M provider on the current list of approved manufacturer's list for the life of the wastewater system. (3) The O&M provider shall notify the LHD, the State, and the manufacturer of any expiration of the O&M contract with the owner.	Doug Lassiter, NCSTA, 10/2/2017	Agree
.1302	115	4	THIS SUBSECTION APPEARS TO GIVE THE RESPONSIBILITY OF OPERATION AND MAINTENANCE TO THE MANUAFCTURER INSTEAD OF THE OWNER. THIS REALLY IS AN INCORRECT APPROACH. YOU DON'T BUY A CAR AND THINK YOU CAN FAIL TO MAINTAIN IT BECAUSE THE MANUFACTURER IS GOING TO "PROVIDE FOR THE ONGOING OPERATION AND MAINTENANCE."	APPLY RESPONSIBILITY WHERE IT BELONGS. THE O & M REPSONSIBILITY BELONGS TO THE OWNER OF THE SYSTEM.	Doug Lassiter, NCSTA, 10/24/2017	Agree

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1302	115	4	This should NOT be a responsibility of the manufacturer. Once a system, any system, is installed the responsibility of operation and maintenance that corresponds with the conditions of the permit should be the Owner. If the Owner is offered an O & M contract by the manufacturer, they can choose to contract with the manufacturer or with another Management Entity approved and listed by the manufacturer. Delete the mandatory requirement of manufacturer responsibility for advanced pretreatment systems and make it similar to the other systems permitted by the State, with the inspection and reporting frequency as per rules.		Mike Stidham, E-Z Treat, 10/31/2017	Agree
.1302	115	4 to 5	Item (1) includes the verbiage “the manufacturer of a proprietary advanced pretreatment system shall provide for the ongoing operation and maintenance of its systems. The manufacturer shall make available to the owner an operation and maintenance contract that meets the requirements 6 for the system in accordance with this Section.” The word “manufacturer” should be changed to “Management Entity” as the manufacturer commonly does not provide this service; this is done through a service provider or Management Entity. Using “Management Entity” is consistent with the verbiage used on Line 20 of the same page.		Sheryl Ervin, Bio-Microbics, Inc, 10/31/2017	Agree with modifications
.1302	115	6	"2006, the manufacturer of a proprietary advanced..."	"2006, the manufacturer, or its designated entity, of a proprietary advanced..." Distributors, dealers, etc. may be separate businesses but designated by the manufacturer to do these requirements.	Joe Soulia, Orenco Systems, 10/31/2017	Agree
.1302	115	6	"2006, the manufacturer of a proprietary advanced..."	for discussion… What about non-proprietary systems? Who is responsible? The State since it approved it without manufacturer support?	Joe Soulia, Orenco Systems, 10/31/2017	Agree with modifications
.1302	115	6	"2006, the manufacturer of a proprietary advanced..."	"2006, the manufacturer, or its designated entity, of a proprietary advanced..." Distributors, dealers, etc. may be separate businesses but designated by the manufacturer to do these requirements.	Steve Barry, AQWA, 10/31/2017	Agree
.1302	115	6	"2006, the manufacturer of a proprietary advanced..."	for discussion… What about non-proprietary systems? Who is responsible? The State since it approved it without manufacturer support?	Steve Barry, AQWA, 10/31/2017	Agree with modifications
.1302	115	9 to 10	Item (2) includes the verbiage “the manufacturer shall provide an optional renewable yearly operation and maintenance contract”. The word “manufacturer” should be changed to “Management Entity” as the manufacturer commonly does not provide this service; this is done through a service provider or Management Entity. Using “Management Entity” is consistent with the verbiage used on Line 20 of the same page.		Sheryl Ervin, Bio-Microbics, Inc, 10/31/2017	Agree with modifications
.1302	115	15	Minimum subsurface certification required, manufacturers can authorize anyone?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Anyone who is a certified subsurface operator
.1302	115	17	States manufacturer is to notify LHD and State. It is unlikely the manufacturer will know.	This should say certified operator.	Cory Brantley, 10/2/2017	Agree
.1302	115	26	This is in addition to the original rule. Will this be used instead of laboratory analysis? What is the standard we are trying to meet? What NTU? What DO level? If the standard is not being met, what adjustments are to be made? Most operators do not carry DO or turbidity meters with them. In counties where the number of treatment systems are limited, operators may be hesitant to purchase the equipment. This would then drive up the cost of system operation.		Cory Brantley, 10/2/2017	Yes, this will be an option to be used in place of laboratory analysis. The manufacturer will decide if they want to pursue this option for their systems. We are including standards that must be met and what is to happen if the standard is not met.
.1302	115	26	"evaluation of effluent discharged to the field"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Yes, as observed in the pump tank or other sampling location.
.1302	115	26	Minimum subsurface certification required, manufacturers can authorize anyone?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Anyone who is a certified subsurface operator

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1302	115	36	This calls for advanced treatment systems to measure and record the 7 day and 30 day flows preceding the visual inspection of a system. The implementation of this requirement was a response to issues identified in 2004 in response to system manufacturers claimed that their systems were being overloaded to explain system failures. The 7 day and 30 day flow information has not provided any useful data for operators, owners, LHD or the branch as far as has been reported. It is a superfluous requirement with no apparent benefit. For this reason the requirement should be deleted here and in sec(d)(2). Also see sec .1503(9) for additional rules related to this requirement.		Bill Fenner, Aquapoint, 10/29/2017	Agree
.1302	115	36	Has the flow data provided any useful information? Why is it being collected?		Bill Fenner, Aquapoint, 9/20/2017	Agree
.1302	115	36	Flow should be measured by management entity		Bill Fenner, Aquapoint, 9/20/2017	Agree
.1302	115	36	7 and 30 day flow monitoring, came about when peat systems were relevant. They wanted the extra data. Don't need this. Increases cost of control panel, need a spcecial control panel, extra record keeping. Take out of rules.		Cory Brantley, 10/2/2017	Agree with modifications
.1302	115	36	Although part of the existing rule, this data has limited use. If the sample comes back noncompliant, the protocol is to resample. Knowing the flow will not change that fact.		Cory Brantley, 10/2/2017	Agree
.1302	116	3	The excessive sampling of onsite treatment systems is a major reason they are not used more often. Clients do not want a system that has additional costs of $300 to $400 annually due to sampling. If a system has demonstrated the ability to meet a standard, then the requirements should be one sample every five years.		Cory Brantley, 10/2/2017	Agree and we have included an option for a manufacturer to request field sampling parameters only for their advanced pretreatment units.
.1302	116	14	In the current 1970 rules, there is a rule that has not been enforced since day one, July 1 1970. (5) All samples shall be collected, preserved, transported and analyzed in compliance with 40 CFR 136. The manufacturer shall demonstrate that the system can be sampled in compliance with 40 CFR 136 and that the method for system sampling accurately monitors system performance. Samples shall be analyzed by a state certified laboratory. Samples shall be analyzed for the applicable parameters. The sample collector shall maintain a complete chain of custody from sample collection to analysis for each sample collected. The results of all analyses for each sample shall be reported by the certified wastewater laboratory directly to the ORC and simultaneously to the health department and the state. Repeat sampling at any site shall be performed as required in the system approval, approved performance audit, this Rule, or as otherwise directed by the health department or state as part of an enforcement action. The owner or manufacturer or manufacturer's representative may also re-sample a system to verify or refute sample results, as long as the results of all samples collected are similarly reported.		Mike Stidham, E-Z Treat, 10/31/2017	Agree and disagree. Effluent samples are being taken from advanced pretreatment systems. There is no way we can guarantee that every advanced pretreatment system is sampled. We continue to encourage LHDs to make sure that these systems are sampled in accordance with their PIA approval and operation permits. OSWP is trying to create a data collection and management system that could help verify that these systems are sampled in accordance with the rules.
.1302	116	25	The inclusion of mass loading as a parameter to determine system compliance is a great positive step by the department. This allows for compliance to be measured by the system performance measured against the design goals. I do recommend the department publish a guide document to provide an example of compliance documentation calculations.		Bill Fenner, Aquapoint, 10/29/2017	Agree

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1303	117	1 to 11, 12 to 17	This section says that (a)(1), (A),(B),(C) above is the definition of a malfunction. My biggest concern is with "(C)". First in SECTION 1700 – ARROVAL AN PERMITTING OF WASTEWATER SYSTEM SYSTEMS, TECHNOLOGIES, COMPONANTS, OR DEVICES there is several references to "malfunction". Re- porting performance in different states may be difficult regarding "(C)". More importantly this definition has been applied in pass / fail performance decisions regarding a re- cent controlled demonstration for gravity septic tank effluent systems install at less than 24", specifical- ly 20". I think I understand why "(C)" is there, likely is in response to an individual enforcement action. How- ever, when applied to a 1 – 2 year demonstration I think it is not appropriate critera for long term per- formance, particully considering that in many cases that the criteria may not be appropriate, acceptable for a real estate transfer.		Tom Ashton, American Manufacturing Company, 10/31/2017	The determination of malfunction in accordance with this rule can only be done by someone from the LHD. While we understand your comment, we are going to keep the current language.
.1303	117	21	Per manufacturer recommendation and should not require cleaning less than three years. If so, repor?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	This language is already in the law and cannot be repeated in the rules. Also, trying to track this information would be impossible.
.1303	117	24	Move to grease tank section or table		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. This belongs in the operation and maintenance section.
.1304	118	6	Is this different Management Entity?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	This Management Entity is the wastewater system operator.
.1304	118	9	Subsurface system is different classification altogether?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Subsurface wastewater system operators have their own classification in the 15A NCAC 08G rules.
.1304	118	13	Since the ongoing compliance is valuable information for the manufacturer of the advance pretreatment system, it would be proper to add the issuance of the inspection report to the manufacturer. Amend: (c) The Management Entity shall provide a copy of the inspection report to the owner, the LHD, and where applicable the manufacturer of the proprietary advanced pretreatment system.		Mike Stidham, E-Z Treat, 10/31/2017	Agree
.1305	118	28	Is "IP, CA" typo?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	No
.1305	119	2	(e) IIIh should be IIIi		Len Gilstrap, Carteret LHD, 10/31/2017	Agree
.1305	119	2	Should be IIIi, not IIIh, typo, IIIh does not require inspection currently		Len Gilstrap, Carteret LHD, 9/20/2017	Agree
.1305	119	1 to 4	Delete		ABCD Construction, 9/14/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Andrew Daywalt, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.

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.1305	119	1 to 4	Delete		Ben Hildreth, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Brian Beebe, 10/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Cable Septic and Backhoe Service, 10/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Charles Dodge, C&C Septic Services, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.

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.1305	119	1 to 4	Delete		Charles Driggers, Driggers Septic Tank, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Charlie Brice, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Chris Hedrick, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Chriscoe Bacchoe Service, 10/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Daniel Newsome, D&D Organic Farming, 10/24/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Danny Dennis, 10/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.

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.1305	119	1 to 4	Delete		David Murphy, DRM, 10/24/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Donald Martin, 10/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Garland Walker, 10/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Gerald Leonard, 10/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Hank Hill Grading, 10/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.

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.1305	119	1 to 4	Delete		Harry Hatcher, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Jeff Link, Rowan, LHD, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Jerry Pearce, 9/15/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Johnny Strickland, 10/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Kearns Pumping Service, 10/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Keith Blackburn, B & C Concrete, 9/20/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Kippy Blanks, 9/28/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.

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.1305	119	1 to 4	Delete		Larry Beam, 9/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Lawrence Henning, 9/15/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Lester Breedlove, 10/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Mark Johnson, 10/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Marty Maness, 11/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Michael Barger, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.

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.1305	119	1 to 4	Delete		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Parrish Homes and Pools,Inc, 10/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Pat Rentz, VIP Inspection Services, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Perry's Grading & Septic Service, 9/14/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Guilford County has 5023 3B type systems on record. That is an average of 1000 inspections a year that need to be done. Over the past 10 months, we have completed 590 inspections. Of these 590 inspections, 44 had failing systems. We define a failing system as either the pump is not working and effluent is in the riser, or the drainfield is surfacing. While that is not a huge percentage of failing systems, that is still 44 systems that WERE failing and now are working properly. I feel this inspection in not only a great service to help protect the public's health, but also a great means of educating the public on their septic system. I have not kept up with the percentage of homeowners who are actually present when I do the inspection, but I would estimate it between 40-50 percent. Many don't know where their septic system is (especially if it is pumped offsite) or what it even does. This allows me to do some valuable education and answer any questions the homeowner may have.		Randy Duncan, Guilford LHD, 10/3/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.

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.1305	119	1 to 4	If the inspection is privatized, I feel this is what will happen in this order: 1) I mail the homeowner a letter informing them their system is due for an inspection. 2) Upon my arrival, they will produce a report from a private Certified Operator stating the inspection has already been done. 3) Eventually, Guilford County will say it is no longer cost feasible to do these inspections and will eliminate the program. 4) Individual homeowners will not care if their systems get inspected and will not "on their own" hire a certified operator to do the inspection every 5 years. 5) No 3B inspections, either by the county or a certified operator, will eventually be done. Therefore, my request to the state is, either leave the rule as it is now or do away with rule .1961 Table V(a) 3B completely.		Randy Duncan, Guilford LHD, 10/3/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Randy Lackey, Love Valley Septic, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Ronnie Burgin, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Russell C. Trodgon, 9/18/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Russell Lineberry, 10/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.

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.1305	119	1 to 4	Delete		Sterlin Church, Church's Backhoe Service, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Steve Cannon, Rowan LHD, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Terry Maples, 10/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		TM Grading, Inc, 10/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Tyler Jolley, 9/15/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Valentina Oxendine, 10/23/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Vince Scroggins, 9/14/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.

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.1305	119	1 to 4	Delete		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1305	119	1 to 4	Delete		Willilam Garrison, EcoClean Septic, 9/25/2017	Disagree. This provides an option for LHD to have a private certified subsurface operator inspect the system for a limited type. For LHDs that have very limited staff, this can provide an opportunity to discover problems with systems before the system malfunctions. If an LHD does not want to offer this option, they do not have to. This also provides private industry with a new potential revenue stream.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		ABCD Construction, 9/14/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Andrew Daywalt, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Ben Hildreth, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Brian Beebe, 10/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Cable Septic and Backhoe Service, 10/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Charles Dodge, C&C Septic Services, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.

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.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Charles Driggers, Driggers Septic Tank, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Charlie Brice, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Chris Hedrick, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Chriscoe Bacchoe Service, 10/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Daniel Newsome, D&D Organic Farming, 10/24/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Danny Dennis, 10/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		David Murphy, DRM, 10/24/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Donald Martin, 10/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.

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.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Garland Walker, 10/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Gerald Leonard, 10/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Hank Hill Grading, 10/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Harry Hatcher, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	"judgement in ~~requiring repairs that will enable the~~ permitting the system to function restoring. System may need to be repaired, thus repair permit."		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Proposed wording is very confusing and not sure it could be defined.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Jeff Link, Rowan, LHD, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Jerry Pearce, 9/15/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Johnny Strickland, 10/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Kearns Pumping Service, 10/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Keith Blackburn, B & C Concrete, 9/20/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Kippy Blanks, 9/28/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Larry Beam, 9/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Lawrence Henning, 9/15/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Lester Breedlove, 10/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Mark Johnson, 10/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Marty Maness, 11/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Michael Barger, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Parrish Homes and Pools,Inc, 10/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.

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.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Pat Rentz, VIP Inspection Services, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Perry's Grading & Septic Service, 9/14/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Randy Lackey, Love Valley Septic, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Ronnie Burgin, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Russell C. Trodgon, 9/18/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Russell Lineberry, 10/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Sterlin Church, Church's Backhoe Service, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Steve Cannon, Rowan LHD, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Terry Maples, 10/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		TM Grading, Inc, 10/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.

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.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Tyler Jolley, 9/15/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Valentina Oxendine, 10/23/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Vince Scroggins, 9/14/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19	Leave as written, but attention should be given to this item as "best professional judgement" should be allowed in writing the permits, which Onsite has opposed		Willilam Garrison, EcoClean Septic, 9/25/2017	Disagree. The proposed rules overall provide the best professional judgement for new systems. In this rule, we are only referring to repairing a malfunctioning system. The only place for best professional judgement is for repair of a malfunctioning system.
.1306	119	19 to 20	This rule should also specify the Engineered Option Permitas as an option for repair of malfunctioning systems.	This rule should also specify the Engineered Option Permitas as an option for repair of malfunctioning systems.	Consulting Soil Scientists of the Carolinas, Inc, 10/22/2017	Agree
.1306	119	22	To another treatment plant not ss		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Can be to a wastewater treatment plant or an onsite wastewater treatment system.
.1307	120	9	Expand on how to abandon an onsite wastewater treatment system. What to do with the drainfield. What can't be done with the drainfield. More guidance. Schools want to know if the can use drainfields as ballfields.		Courtney Silverthorne, Pitt LHD, 9/20/2017	Agree
.1307	120	10	When the term components is used in wastewater systems, if can mean a variety of things. Following the current proposal, does the State intend to collapse the drainfield?	Suggested language - "If a wastewater system is found to be non-repairable or no longer required, the tanks shall have the contents removed by a person certified as a septage firm, the tanks collapsed or otherwise secured per the LHD, and the above ground components de-energized and removed."	Doug Lassiter, NCSTA, 10/2/2017	Agree
.1307	120	10	THE PROPOSAL FOR ABANDONMENT OF A SEPTIC TANK SYSTEM NEEDS CLARIFICATION. THE PROPOSAL SAYS THE CONTENTS SHALL BE REMOVED AND THE COMPONENTS COLLAPSED AND BACKFILLED. SINCE THE "SYSTEM" ALSO INCLUDES THE DISPERSAL FIELD, IS IT THE INTENT THAT, FOR THE CHAMBER SYSTEM AS AN EXAMPLE, THE CHAMBERS WOULD BE REMOVED AND THE EXCAVATION CLEANED OF THE REMAINING CONTENTS? THIS SUBSECTION MAY NEED REWORKING	CONSIDER: "IF A WASTEWATER SYSTEM IS FOUND TO BE NON-REPAIRABLE OR NO LONGER REQUIRED, THE TANKS SHALL HAVE THE CONTENTS REMOVED BY A PERSON CERTIFIED AS A SEPTAGE FIRM, THE TANKS COLLAPSED OR OTHERWISE SECURED PER LOCAL HEALTH DEPARTMENT, AND THE ABOVEGROUND COMPONENTS DE-ENERGIZED AND REMOVED."	Doug Lassiter, NCSTA, 10/24/2017	Agree
.1400	120	16	Incorporate Septic Tank Standards per ASTM 1227 – 13		Alan Clapp, LSS, 10/24/2017	Disagree. The standards in ASTM C1227 are significantly different than the standards for concrete tanks in the current and proposed rules. There is no evidence that the current requirements do not protect public health and the environment, and no reason to significantly change the design criteria for concrete septic tanks.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1401	120	26	Mastic		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. The State is not going to approve the mastic used with a concrete tank.
.1401	120	34	4500 gallons or less		Glenn Hines, 10/29/2017	Disagree. OSWP has compromised with industry and agree to a size of 4,000 gallons.
.1401	121	15	Strike through beginning of sentence up to "For traffic loads"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. The volume of 3,500 gallons lines up with a system with a design daily flow of 3,000 gpd. This has also been the OSWP policy for a number of years. This policy was worked on in conjunction with the tank industry. Also, OSWP has seen problems with tanks over this size that are not traffic rated.
.1401	121	15 to 16	why??no justification		Glenn Hines, 10/29/2017	Disagree. The volume of 3,500 gallons lines up with a system with a design daily flow of 3,000 gpd. This has also been the OSWP policy for a number of years. This policy was worked on in conjunction with the tank industry. Also, OSWP has seen problems with tanks over this size that are not traffic rated.
.1401	121	19	What constitutes a third party? PE licensed in the State of NC? PE licensed in any of the 50 states? Non-accredited testing agency? Accredited testing agency?		Bruce Stowe, RGP, 10/31/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	19	I support the application of 4 inches of Mercury applied to any type of tank construction material for 5 minutes. This test method is also described in the National Precast Concrete Association Best Practices Manual for Onsite Wastewater Systems. There are multiple strength testing options for issuance of an initial septic tank approval. The Department can create a one-size-fits-all testing protocol that does not recognize that septic tanks develop strength differently depending upon the materials of construction. Another option is to maintain the Departments' current program, where separate policies for concrete and non-concrete construction materials are applied. The Department could continue applying its current framework that establishes separate requirements for concrete and non-concrete tanks, using the CSA B66 tank manufacturing standard, which Infiltrator also supports. Maintaining the current program would require manufacturers of CSA B66-certified tanks to undergo unannounced biannual manufacturing facility audits to verify the implementation of quality programs and periodically test production parts for conformance with the standard. The auditing requirement that accompanies certification goes well beyond what the vast majority of concrete precasters perform for quality control. Another supporting reason to have a separate requirement for thermoplastic tanks is that corrugated thermoplastic tanks are designed and manufactured to develop design strength when consolidated soil occupies the space between the corrugations and surrounds the tank.	No change or approve thermoplastic tanks when certified to meet the latest edition of CSA B66.	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Based on all the comments provided we have decided to strike this part of the rule.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1401	121	19	Performing a vacuum test on an above-ground thermoplastic tank provides little useful information about performance when properly installed in soil. Testing thermoplastic tanks above ground using elevated vacuum levels is comparable to assessing the worthiness of a concrete tank by dropping it from four feet above ground and determining that the concrete tank design is not suitable for use when cracks form upon impact. Thermoplastic tanks are regularly dropped from a 4-foot height off of a delivery truck and withstand the impact. Tanks manufactured from different materials have differing capabilities and develop strength through differing physical mechanisms, supporting the rationale for different approval and testing mechanisms. "Establishing a one-size-fits-all strength requirement for all tank materials invariably places some tanks models at a disadvantage and others at an advantage. As an engineer with a Master's Degree in geotechnics and licensed to practice engineering in three states, my professional opinion is that there are no unique geotechnical properties exhibited by North Carolina soils that would warrant special testing outside of the CSA B66 standard. None of North Carolina's bordering states, including Virginia, Tennessee, Georgia, and South Carolina, implement a one-size-fits-all tank approval program for concrete and non-concrete tanks. All recognize IAPMO certification and conformance with dimensional requirement in the rule for Department approval.		Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	19	It is important to compare the proposed 15A NCAC 18E .1401 requirements with the national septic tank regulatory framework. Thirty-six states, including North Carolina, currently maintain a septic tank regulatory framework with different requirements for concrete and non-concrete tanks. Most states include requirements to meet IAPMO or CSA standards for thermoplastic tanks. These states include: Alabama, Arkansas, Alaska, Arizona, California, Colorado, Connecticut, Delaware, Georgia, Florida, Hawaii, Iowa, Idaho, Illinois, Indiana, Kentucky, Kansas, Louisiana, Massachusetts, Maryland, Maine, Missouri, Mississippi, Montana, New Jersey, New Mexico, Ohio, Oklahoma, Rhode Island, South Carolina, Tennessee, Texas, Utah, Virginia, West Virginia, and Wyoming Whether North Carolina's septic tank rules require vacuum testing using 4 inches of Mercury for 5 minutes or establish differentiated non-concrete septic tank requirements using the CSA B66 standard, the North Carolina rules will fit into the national regulatory framework."		Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Based on all the comments provided we have decided to strike this part of the rule.
			On a final note, current 15A NCAC 18A .1900 already establishes differentiated requirements for another component of the onsite wastewater treatment system, the drainfield. This element of the onsite wastewater program appears to be functioning properly and without controversy. Producers of rock used in soil absorption systems must bear the burden of proof that their aggregate products meet ASTM D-448 through particle size analysis. Manufacturers of proprietary drainfield products approved under 15A NCAC 18A .1969 are held to a more stringent standard, being required to perform hydraulic, chemical, treatment, and structural evaluations in order gain Department approval. In contrast, producers of large-diameter gravelless pipe are required to meet ASTM F 667 requirements in accordance with 15A NCAC 18A .1956(3)(a). However, there is no materials testing, structural testing, or third-party certification of the large-diameter pipe product required in order for the product to be used in the field.			Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		ABCD Construction, 9/14/2017	Based on all the comments provided we have decided to strike this part of the rule.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Andrew Daywalt, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Ben Hildreth, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	This section requires vacuum testing of prefabricated tanks to 4 inches of mercury but the standard for installed tanks in .0805(c)(2) is only 2.5 inches of mercury. What justification is there for the difference?		Bill Fenner, Aquapoint, 10/29/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Brian Beebe, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Cable Septic and Backhoe Service, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Charles Dodge, C&C Septic Services, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Charles Driggers, Driggers Septic Tank, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Charlie Brice, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Chris Hedrick, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Chriscoe Bacchoe Service, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Daniel Newsome, D&D Organic Farming, 10/24/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Danny Dennis, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		David Murphy, DRM, 10/24/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Donald Martin, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	THIS CHANGE IN THE TESTING FOR TANK STRUCTURE IS A 20% DECREASE IN THE PRIOR TESTING REQUIREMENTS PLACED ON TANK MANUFACTURERS AND DOES NOT MEET THE ENGINEERING SET IN RULES OF 300 PSF IN ADDITION TO ALL OTHER LOADS ANTICIPATED IN AN UNDERGROUND STRUCTURE.	THIS DECREASE IN REQUIRED STRUCTURAL INTEGRITY SHOULD BE REMOVED. KEEP THE 5 INCHES OF MERCURY FOR 2 MINUTES WITHOUT DEFORMATION OR LOSS OF VACUUM THAT IS NOT RECOVERABLE UPON RELEASE OF VACUUM. THIS IS FOR ALL TANKS OF ALL MATERIALS. THIS STANDARD SHOULD BE FOR INITIAL APPROVAL OF TANK DESIGN, AND SHOULD APPLY TO TANKS SOLD IN NC NOW AND IN THE FUTURE (NO GRANDFATHERING). SUBSEQUENT TESTING TO THE APPROVAL LEVEL (5 INCHES FOR 2 MINUTES) SHOULD BE DONE WITHIN NC AND WITNESSED BY LHD AND STATE.	Doug Lassiter, NCSTA, 10/24/2017	Based on all the comments provided we have decided to strike this part of the rule.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1401	121	21	Structural testing of 300 psf in addition to all other loads that an underground structure may be subject to (in plain English greater than 300 psf) would be five inches of mercury, not four. This has been the standard set by the Department for over a decade. To make the intial design structural stesting protocol more curious is that, by normal engineering standards, an inital design test is the standard (five inches of mercury) times a safety factor, usually 1.4 to 1.5, meaning the design test should be seven inches of mercury.	Go to five inches of mercury for five minutes	Doug Lassiter, NCSTA, 9/20/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Garland Walker, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Gerald Leonard, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Hank Hill Grading, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Harry Hatcher, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Use D'Amato and Devkota standard of 5 inches		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Jeff Link, Rowan, LHD, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Jerry Pearce, 9/15/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Johnny Strickland, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Kearns Pumping Service, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Keith Blackburn, B & C Concrete, 9/20/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Kippy Blanks, 9/28/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Larry Beam, 9/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Lawrence Henning, 9/15/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Lester Breedlove, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Mark Johnson, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Marty Maness, 11/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Michael Barger, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Parrish Homes and Pools,Inc, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Pat Rentz, VIP Inspection Services, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Perry's Grading & Septic Service, 9/14/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Randy Lackey, Love Valley Septic, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Ronnie Burgin, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	This section places a requirement of testing for structural integrity prior to State approval being granted. While the idea is good, the State has historically place a requirement for tanks to meet 5 inches of mercury, not 4 inches. Since the rules state in other sections of current rules and these proposed rules that tanks shall be constructed to withstand uniform live loads of 300 psf in addition to all other forces an underground structure may experience, this mean the tank is required to withstand an excess of 300 psf. However, the State is proposing 4 inches of mercury which is only 288 psf, while 5 inches is 360 psf.	Delete 4 inches of mercury for five minutes and inser 5 inches of mercury for two minutes without permanent deformation of the tank or tank openings. In an underground structure, if the pressures result in any deformantion of the tank, there will be no ability to return tot he original shape since the dirt will be around it.	Russ Ayers, Bennie Moore Septic Tank, 9/20/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Russell C. Trodgon, 9/18/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Russell Lineberry, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Sterlin Church, Church's Backhoe Service, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Steve Cannon, Rowan LHD, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Terry Maples, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		TM Grading, Inc, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Tyler Jolley, 9/15/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Valentina Oxendine, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Vince Scroggins, 9/14/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	21	Change four inches to five inches, change five minutes to two minutes		Willilam Garrison, EcoClean Septic, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24	THIS SECONDARY TESTING FOR WATERTIGHTNESS AFTER THE STRUCTURE HAS SUCCESSFULLY PASSED A VACUUM TEST OF 5 INCHES OF MERCURY IS UNNECESSARY AND BURDENSOME. A STRUCTURE THAT LEAKS WATER WOULD NOT BE ABLE TO PULL 5 INCHES OF MERCURY IN A VACUUM TEST.	ELIMINATE (2), THE ADDED HYDROSTATIC TEST.	Doug Lassiter, NCSTA, 10/24/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24	Unnecessary and burdensome. Once the structural test of application of a vacuum is completed successfully, the design is adequately found to be structurally sound, but also sealed, since a vacuum cannot be achieved if the tank were leaking.	Eliminate (2)	Doug Lassiter, NCSTA, 9/20/2017	Based on all the comments provided we have decided to strike this part of the rule.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1401	121	24	Subparagraph (f)(2)	This is unnecessary and burdensome and costly. Once a structural test of application of a vacuum is completed, and design is adequately found to structurally sound, a vacuum seal cannot be completed if unit were leaking.	NC Home Builders Assn, 10/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24	Unncessary and a waste of water. After the successful completion of the vacuum test, there is no need for a water test, since the tank could not produce a vacuum if it were capable of leaking water.	Eliminate (2)	Russ Ayers, Bennie Moore Septic Tank, 9/20/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		ABCD Construction, 9/14/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Andrew Daywalt, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Ben Hildreth, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Brian Beebe, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Cable Septic and Backhoe Service, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Charles Dodge, C&C Septic Services, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Charles Driggers, Driggers Septic Tank, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Charlie Brice, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Chris Hedrick, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Chriscoe Bacchoe Service, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Daniel Newsome, D&D Organic Farming, 10/24/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Danny Dennis, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		David Murphy, DRM, 10/24/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Donald Martin, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Garland Walker, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.

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.1401	121	24 to 26	Delete		Gerald Leonard, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Hank Hill Grading, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Harry Hatcher, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Jeff Link, Rowan, LHD, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Jerry Pearce, 9/15/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Johnny Strickland, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Kearns Pumping Service, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Keith Blackburn, B & C Concrete, 9/20/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Kippy Blanks, 9/28/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Larry Beam, 9/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Lawrence Henning, 9/15/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Lester Breedlove, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Mark Johnson, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Marty Maness, 11/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Michael Barger, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Parrish Homes and Pools,Inc, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Pat Rentz, VIP Inspection Services, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Perry's Grading & Septic Service, 9/14/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Randy Lackey, Love Valley Septic, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Ronnie Burgin, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Russell C. Trodgon, 9/18/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Russell Lineberry, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Sterlin Church, Church's Backhoe Service, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.

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.1401	121	24 to 26	Delete		Steve Cannon, Rowan LHD, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Terry Maples, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		TM Grading, Inc, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Tyler Jolley, 9/15/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Valentina Oxendine, 10/23/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Vince Scroggins, 9/14/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	24 to 26	Delete		Willilam Garrison, EcoClean Septic, 9/25/2017	Based on all the comments provided we have decided to strike this part of the rule.
.1401	121	34	Pre-approved tanks is not defined. To clarify, are current approved tanks considered “pre-approved?” If yes, exactly what does this mean and what, if any, are their requirements to show compliance with the proposed draft rule changes? If “pre-approved” is considered only the first step in the proposed “two step process,” these pre-approved tanks also “shall conduct the structural loading requirements of paragraph (f) of this rule?” (draft rules page 120 (c) lines 27-33). If yes, does the currently assigned and permanently cast or molded identification number in existing inventories become the “temporary identification number?” If yes, explain the time and method for the transition between temporary and permanent numbered inventoried tanks. For tanks that are acceptable under current rule but not under proposed draft rules, such as the psi for concrete as an example, how does the State propose to assist the industry’s use of this inventory? What is the estimated time and cost of finding engineering, construction adjustments, third party testing and third party witness(s) and plan creation for submittal review of the approved 1,364 septic and pump tanks posted on the State’s website. Keep in mind this number does NOT include all effluent filters, risers, and pipe penetration that must be re-approved under draft.		Latt Moretz, Molds of Bethlehem, Inc, 10/6/2017	Agree and have modified the language. The requirement for proof testing has also been removed. That should also help clarify this language.
.1402	122	8	Why are you allowing septic tanks to be sold without a coating or tar above the water line on the interior?		Anthony Lamando, Advantage Inspection, 9/1/2017	Agree with bigger picture concept of watertight tanks. At this time, there is not a significant enough problem with leaking tanks that the State can require all tanks to have a lining inside the tank.
.1402	122	9	Add "structurally sound"		ABCD Construction, 9/14/2017	Agree
.1402	122	9	Add "structurally sound"		Andrew Daywalt, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Ben Hildreth, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Brian Beebe, 10/23/2017	Agree
.1402	122	9	Add "structurally sound"		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Agree
.1402	122	9	Add "structurally sound"		Cable Septic and Backhoe Service, 10/23/2017	Agree

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.1402	122	9	Add "structurally sound"		Charles Dodge, C&C Septic Services, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Charles Driggers, Driggers Septic Tank, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Charlie Brice, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Chris Hedrick, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Chriscoe Bacchoe Service, 10/23/2017	Agree
.1402	122	9	Add "structurally sound"		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Agree
.1402	122	9	Add "structurally sound"		Daniel Newsome, D&D Organic Farming, 10/24/2017	Agree
.1402	122	9	Add "structurally sound"		Danny Dennis, 10/23/2017	Agree
.1402	122	9	Add "structurally sound"		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Agree
.1402	122	9	Add "structurally sound"		David Murphy, DRM, 10/24/2017	Agree
.1402	122	9	Add "structurally sound"		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Donald Martin, 10/23/2017	Agree
.1402	122	9	REMAIN CONSISTENT WITH THE DEFINITION OF SEPTIC TANK, ADD STRUCTURAL STANDARD OF 300 PSF	ELIMINATE PROPOSED SENTENCE STRUCTURE AND REMAIN CONSISTENT WITH SEPTIC TANK DEFINITIONS FOR ALL TANKS	Doug Lassiter, NCSTA, 10/24/2017	Agree
.1402	122	9	Add structurally sound back to language	"Tanks shall be watertight, structurally sound, and not subject to excessive corrosion or decay."	Doug Lassiter, NCSTA, 9/20/2017	Agree
.1402	122	9	Add "structurally sound"		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Agree
.1402	122	9	Add "structurally sound"		Garland Walker, 10/23/2017	Agree
.1402	122	9	Add "structurally sound"		Gerald Leonard, 10/23/2017	Agree
.1402	122	9	Add "structurally sound"		Hank Hill Grading, 10/23/2017	Agree
.1402	122	9	Add "structurally sound"		Harry Hatcher, 9/25/2017	Agree
.1402	122	9	Strike sentence after watertight		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.1402	122	9	Add "structurally sound"		Jeff Link, Rowan, LHD, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Jerry Pearce, 9/15/2017	Agree
.1402	122	9	Add "structurally sound"		Johnny Strickland, 10/23/2017	Agree
.1402	122	9	Add "structurally sound"		Kearns Pumping Service, 10/23/2017	Agree
.1402	122	9	Add "structurally sound"		Keith Blackburn, B & C Concrete, 9/20/2017	Agree
.1402	122	9	Add "structurally sound"		Kippy Blanks, 9/28/2017	Agree
.1402	122	9	Add "structurally sound"		Larry Beam, 9/23/2017	Agree
.1402	122	9	Add "structurally sound"		Lawrence Henning, 9/15/2017	Agree
.1402	122	9	Add "structurally sound"		Lester Breedlove, 10/23/2017	Agree
.1402	122	9	Add "structurally sound"		Mark Johnson, 10/23/2017	Agree
.1402	122	9	Add "structurally sound"		Marty Maness, 11/23/2017	Agree
.1402	122	9	Add "structurally sound"		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Agree
.1402	122	9	Add "structurally sound"		Michael Barger, 9/25/2017	Agree

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.1402	122	9	Add "structurally sound"		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Parrish Homes and Pools,Inc, 10/23/2017	Agree
.1402	122	9	Add "structurally sound"		Pat Rentz, VIP Inspection Services, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Perry's Grading & Septic Service, 9/14/2017	Agree
.1402	122	9	Add "structurally sound"		Randy Lackey, Love Valley Septic, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Agree
.1402	122	9	Add "structurally sound"		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Agree
.1402	122	9	Add "structurally sound"		Ronnie Burgin, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Russell C. Trodgon, 9/18/2017	Agree
.1402	122	9	Add "structurally sound"		Russell Lineberry, 10/23/2017	Agree
.1402	122	9	Add "structurally sound"		Sterlin Church, Church's Backhoe Service, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Steve Cannon, Rowan LHD, 9/25/2017	Agree
.1402	122	9	Add "structurally sound"		Terry Maples, 10/23/2017	Agree
.1402	122	9	Add "structurally sound"		TM Grading, Inc, 10/23/2017	Agree
.1402	122	9	Add "structurally sound"		Tyler Jolley, 9/15/2017	Agree
.1402	122	9	Add "structurally sound"		Valentina Oxendine, 10/23/2017	Agree
.1402	122	9	Add "structurally sound"		Vince Scroggins, 9/14/2017	Agree
.1402	122	9	Add "structurally sound"		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Agree
.1402	122	9	Add "structurally sound"		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Agree
.1402	122	9	Add "structurally sound"		Willilam Garrison, EcoClean Septic, 9/25/2017	Agree
.1402	122	10	Is septic tank - grease tank? Both grease tank risers should be brought to grade?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Yes
.1402	122	10	Two access openings and access device for filters?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Yes
.1402	122	11 to 13	all septic tanks have risers to finish grade or 6” above		Glenn Hines, 10/29/2017	Agree in concept. G.S. 130A-335.1(b)(4) only requires that the access device come to within six inches of the finished grade. We cannot require the risers to come to grade for all septic tanks.
.1402	122	18	Clarify venting of tank		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. This allows different options for venting gases.
.1402	122	23	CURRENT RULE HAS THREE POSSIBLE INLET PORTS AND ONE OUTLET PORT	REVIEW IN CONJUNCTION WITH (7) BELOW	Doug Lassiter, NCSTA, 10/24/2017	During the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	25	not inlet		Glenn Hines, 10/29/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1402	122	25	Wake County supports one each inlet and outlet end		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	25	(d) (6) inlet and outlet openings shall have cast or manufactured penetration points. Please review this as it applies to rule .1404. I might be wrong, but I don't think cast in place openings meet the proposed requirements		Joe Lynn, 10/31/2017	Disagree. The cast or manufactured penetration point means that there is a physical structure set up for the pipe to enter, even if more needs to be done to the opening. This does not conflict with Rule .1404, which specifies the requirements for pipe penetrations.
.1402	122	26	Delete "inlet and"		ABCD Construction, 9/14/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Andrew Daywalt, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Ben Hildreth, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Brian Beebe, 10/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Evaluation of pipe penetration seal design indicates that most if not all ASTM C1644 compliant products are "cast in" sleeves for precast concrete structures. As a thermoplastic tank mfgr, we do not have a means of integrating a "cast in" type seal/sleeve to our product design. Roth supplies ASTM C923 (4" SDR 35) and ASTM C564 (4" Sch 40) rubber septic grommets that ship with all of our tank products. Will these or other products be allowed if no ASTM C1644 listed products are compatible with thermoplastic tank products?		Bruce Stowe, RGP, 10/31/2017	Yes
.1402	122	26	Delete "inlet and"		Cable Septic and Backhoe Service, 10/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Charles Dodge, C&C Septic Services, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1402	122	26	Delete "inlet and"		Charles Driggers, Driggers Septic Tank, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Charlie Brice, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Chris Hedrick, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Chriscoe Bacchoe Service, 10/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Daniel Newsome, D&D Organic Farming, 10/24/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Danny Dennis, 10/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		David Murphy, DRM, 10/24/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Donald Martin, 10/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	INLET PIPE PENETRATIONS ARE NOT AS NECESSARY TO REQUIRE A FLEXIBLE SLEEVE AS WITH OUTLET PIPE PENETRATION. THE INTRODUCTION OF THREE FLEXIBLE INLET SLEEVES WILL BE COSTLY AND BURDENSOME. WHILE THE STATE HAS REPORTED INCIDENTS OF LEAKING AROUND INLET PORTS, THIS IS A MATTER OF IMPROPER INSTALLATION OF THE BEDDING AROUND THE SEWAGE PIPE.	ELIMINATE THE PROPOSED REQUIRED INLET FLEXIBLE SLEEVES. AS AN ALTERNATIVE, CHANGE ITEM (5) ON LINE 23 TO STATE THAT THERE WILL BE ONE INLET OPPOSITE THE OUTLET.	Doug Lassiter, NCSTA, 10/24/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1402	122	26	The addition of a flexible, connective sleeve as described to inlet pipe penetraations is without a doube an added benefit to the installer or plumber, but one that is realistically burdensome on a vast majority of tank manufacturers who will be forced to modify their tank forms to accommodate the addition. The cost of this addition was noted by the Department in their Fiscal Note to the Commission to be only the material cost of the flexible sleeves, not the actual costs of retrofitting the forms. Since the rules concerning the development of the Fiscal Note include that errors in the Fiscal Note do not necessarily invalidate the Fiscal Note, the error by the Department to not consider this expense may not cause the process to stop. The addition of the flexible sleeve to the outlet port came about because of the requirement of the effluent filter. It was realized that the added weight of the effluent filter plus the pressures caused by the removal and replacement of the filter during service would perhaps cause the cemented outlet pipe to loosen. It was also realized that the location of the outlet pipe, right at the level of the wastewater, would cause leakage of that seal were to break. In the case of the inlet, there is no effluent filter to add weight, no pressures from service, and the inlet invert is two inches above the level of the wastewater.	Eliminate (7)	Doug Lassiter, NCSTA, 9/20/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Garland Walker, 10/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Gerald Leonard, 10/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Hank Hill Grading, 10/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Harry Hatcher, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Jeff Link, Rowan, LHD, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Jerry Pearce, 9/15/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Johnny Strickland, 10/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.

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.1402	122	26	Delete "inlet and"		Kearns Pumping Service, 10/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Keith Blackburn, B & C Concrete, 9/20/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	In the same rule we added an "outlet" boot made of rubber. Does a wonderful job of sealing the tank to the pipe. Only thing we didn't do it on the inlet end for the waste line. I think it would a great advantage to having inlet boots or seals on both inlet and outlet for the pipe penetrations. There only needs to be one Inlet to these concrete septic and pump tanks. Orange County has done this for about 15 years and everyone has realized the benefit.		Keith Vernon, Vernon Septic Systems, 10/25/2017	Agree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Kippy Blanks, 9/28/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Larry Beam, 9/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Lawrence Henning, 9/15/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Lester Breedlove, 10/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Mark Johnson, 10/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Marty Maness, 11/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Michael Barger, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Subparagraph (d)(7)	This is costly and unnecessary. Inlet pipes should be correctly bedded and supported and not in need of the flexible sleeve the outlet needs. Hydraulic cement continues to be successful in packing around the pipe. Delete the proposed requirement of the inlet flexible sleeve.	NC Home Builders Assn, 10/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.

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.1402	122	26	Delete "inlet and"		Parrish Homes and Pools,Inc, 10/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Pat Rentz, VIP Inspection Services, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Perry's Grading & Septic Service, 9/14/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Randy Lackey, Love Valley Septic, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Ronnie Burgin, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	The flexible seal on the inlet pipe may be better than hydraulic cement used normally, but this rule would mean that 3 inlet boots would have to be used, since the State also requires 3 possible inlet pipe penetration points. So, two would not be used, an unnecessary cost. Additonally, the majority of tank manufacturers in Eastern NC would have to change their forms since the side walls are on a slant. This expense would be thousands of dollars to these manufacturers.	Eliminate this requirement	Russ Ayers, Bennie Moore Septic Tank, 9/20/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Russell C. Trodgon, 9/18/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Russell Lineberry, 10/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Sterlin Church, Church's Backhoe Service, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Steve Cannon, Rowan LHD, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Terry Maples, 10/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		TM Grading, Inc, 10/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.

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.1402	122	26	Delete "inlet and"		Tyler Jolley, 9/15/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Valentina Oxendine, 10/23/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Vince Scroggins, 9/14/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	26	Delete "inlet and"		Willilam Garrison, EcoClean Septic, 9/25/2017	Disagree. However, during the discussion in the stakeholders meeting, a potential compromise of "a minimum of one inlet opening" was reached, so that is what is being proposed.
.1402	122	30	THE REQUIREMENT THAT NO PIPE PENETRATION POINT OR OPENING SHALL BE ALLOWED BELOW THE OPERATING WATER LINE IS CURRENT. IN THE PAST, CONCRETE TANK MANUFACTURERS HAVE BEEN REQUIRED TO REMOVE ANY PIPE PENETRATION KNOCKOUT FROM A BOTTOM OF THE TANK, EVEN WHEN CAPABLE OF WITHSTANDING A PRESSURE OF 5 INCHES OF MERCURY. WITH THE INTRODUCTION OF PLASTIC TANKS, THIS IS A PROBLEM. THE BOTTOMS OF THE MID-SEAM TANK HAS THE IDENTICAL INTERUPTION OF THE RIBBING THAT REPORTEDLY PROVIDES THE STRENGTH.	ALLOW THE MANUFACTURER TO DEMONSTRATE THAT THE INTRODUCTION IN THE REINFORCEMENT DOES NOT PREVENT THE TANK IN ITS STRUCTURAL INTEGRITY.	Doug Lassiter, NCSTA, 10/24/2017	Agree
.1402	122	32	Recommend adding the following language to require access risers over effluent filters: (d)(10)(a) "A watertight access riser with removable cover shall be located over the effluent filter. The access riser shall extend to 6 inches above grade."		Bill Fenner, Aquapoint, 10/29/2017	Agree in concept. G.S. 130A-335.1(b)(4) only requires that the access device come to within six inches of the finished grade. We cannot require the risers to come to grade for all septic tanks.
.1402	122	32	We have not encountered a tank design standard or regulation that allowed a tank outlet flow area less than the inlet. Measured from the tank bottom up of the liquid surface down?		Bruce Stowe, RGP, 10/31/2017	Top of the liquid level down
.1402	122	35	15A NCAC 18A .1954(a)(6) allows the invert of the outlet to <u>be at least</u> 2 inches lower than the invert of the inlet. Proposed 15A NCAC 18E .1402(d)(11) is prescriptive in requiring an exact invert drop between inlet and outlet of two inches. This prescriptive requirement represents an unwarranted burden on manufactures and should be removed, such that the proposed rule matched the existing rule.	Proposed change: (11) invert of the outlet shall be <u>at least</u> two inches lower in elevation than the invert of the inlet;	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Agree

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.1402	123	1	At the NCSTA 27th Annual Convention, Dr. Rubin's opening session comments, in summary for me was, before you should or can improve/move forward you must know HOW or IF what you are doing is working. Moving forward is not the solution if you are headed in the wrong direction. Example: What constitutes a two-compartment tank? Prior to the now accepted baffle walls being approved, walls in concrete tanks were not allowed to be slid into locking grooves. They were required to be poured in place to ensure structural integrality that would not allow passage to another compartment except through the clear zone, the 25 to 50% of the liquid level. If a partition wall allows scum or settled materials to pass to another compartment that is not within the clear zone, the wall is useless. The science did not change, so what did change that allowed current partitions wall approvals which obviously return some tanks to single compartment operating results, reducing effluent quality?		Latt Moretz, Molds of Bethlehem, Inc, 10/6/2017	While we understand the spirit of the question, there has been no documented evidence that shows that any of the currently approved partition walls return two compartment septic tanks to a single compartment septic tank in operation. Additionally, there are many processes that occur in a septic tank and it would be unrealistic for us to think that we could identify just one item as a potential problem. Based on our experience with on-site wastewater treatment systems, it is never just one item that is impacting the system. It is always multiple items.
.1402	123	5	THE REQUIREMENTS OF A PARTITION NEED TO MAINTAIN THE INTENT OF THE PARTITION FOR THE LIFE OF THE SEPTIC TANK. JUST A DESIGN FEATURE DOES NOT IMPLY SUSTAINED USE	CONSIDER "THE PARTITION SHALL BE DESIGNED, MANUFACTURED, AND INSTALLED TO REMAIN IN POSITION AND SHALL BE CONSTRUCTED TO WITHSTAND A PRESSURE OF 300 PSF." In this instance, there would be no additional loading pressures anticipated.	Doug Lassiter, NCSTA, 10/24/2017	Agree with modifications
.1402	123	5	This requirement does not fulfill the requirement of this subsection as it speaks to design and construction. There is also an unusual standard set. The partition is later described to have a four inch slot or equivalent located from 25% to 50% of the liquid depth, and there is the 2/3 to 1/2 compartment design. So a partition could pass this requirement by subjecting it to liquid capacity found in 1/3 the liquid depth of a 1000 gallon tank (333 gallons) when the partition is 25% of the total interior height (.25 x 333 gallons). So the minimum would be .25 x 333 x 8.33 (weight of water per gallon) = 693 pounds. Not exactly a structurally sound partition, not 300 psf.	Use the following proposed language - "the partition shall be designed, manufactured, and installed to remain in position and shall be constructed to withstand a pressure of 300 psf."	Doug Lassiter, NCSTA, 9/20/2017	Agree with modifications
.1402	123	5	"when subjected to a design liquid capacity in either ~~one~~ compartment"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree with modifications
.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		ABCD Construction, 9/14/2017	Agree
.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Andrew Daywalt, 9/25/2017	Agree
.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Ben Hildreth, 9/25/2017	Agree
.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Agree
.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Agree
.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Brian Beebe, 10/23/2017	Agree
.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Agree
.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Cable Septic and Backhoe Service, 10/23/2017	Agree
.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Charles Dodge, C&C Septic Services, 9/25/2017	Agree
.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Agree
.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Charles Driggers, Driggers Septic Tank, 9/25/2017	Agree
.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Charlie Brice, 9/25/2017	Agree
.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Chris Hedrick, 9/25/2017	Agree
.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Chriscoe Bacchoe Service, 10/23/2017	Agree

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.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Agree
.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Daniel Newsome, D&D Organic Farming, 10/24/2017	Agree
.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Danny Dennis, 10/23/2017	Agree
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.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Agree
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.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Garland Walker, 10/23/2017	Agree
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.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Michael Barger, 9/25/2017	Agree
.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Agree
.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Agree
.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Parrish Homes and Pools,Inc, 10/23/2017	Agree
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.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Russell C. Trodgon, 9/18/2017	Agree
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.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Sterlin Church, Church's Backhoe Service, 9/25/2017	Agree
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.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Valentina Oxendine, 10/23/2017	Agree
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.1402	123	5 to 6	Add to end of sentence "manufactured, installed, and maintained"		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Agree
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.1402	123	7	Delete "of steel" from sentence		ABCD Construction, 9/14/2017	Agree
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.1402	123	7	Delete "of steel" from sentence		Cable Septic and Backhoe Service, 10/23/2017	Agree
.1402	123	7	Delete "of steel" from sentence		Charles Dodge, C&C Septic Services, 9/25/2017	Agree
.1402	123	7	Delete "of steel" from sentence		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Agree
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.1402	123	7	Delete "of steel" from sentence		Chriscoe Bacchoe Service, 10/23/2017	Agree
.1402	123	7	Delete "of steel" from sentence		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Agree
.1402	123	7	Delete "of steel" from sentence		Daniel Newsome, D&D Organic Farming, 10/24/2017	Agree
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.1402	123	7	Delete "of steel" from sentence		Willilam Garrison, EcoClean Septic, 9/25/2017	Agree
.1402	123	12	30 linear inches of baffle wall - horizontal or vertical plane?		Bruce Stowe, RGP, 10/31/2017	Agree and added horizontal
.1402	123	12	The Branch has approved the use of two 5-inch -diameter openings in the baffle wall. Infiltrator requests an adjustment to allow a hole larger than 4 inches or the option for 4- or 5-inch holes.	Modify the text as follows: (E) two four- or five-inch openings, or one four- or 5-inch opening per 30 linear inches of baffle wall, whichever is greater, may be designed into the partition instead of the four-inch slot;	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Agree
.1402	123	12	"~~two four inch openings or~~ one four inch opening per 30 linear inches of baffle wall~~, whichever is greater,~~ may be designed"		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Current language is based on baffle wall configurations previously approved.
.1402	123	13	able to use removable or knockout seals		Glenn Hines, 10/29/2017	Do not have enough information about these types of seals to determine whether or not they could be added. However, a tank manufacturer could always propose for this type of seal to be approved for their tanks.
.1402	123	15	all outlet and inlet opening to finish grade or 6" above		Glenn Hines, 10/29/2017	Agree in concept. G.S. 130A-335.1(b)(4) only requires that the access device come to within six inches of the finished grade. We cannot require the risers to come to grade for all septic tanks.
.1402	123	16	Not clear, to cover plastic tank - is internal safety required for plastic tanks per PIA		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Plastic tanks are approved in the same method as concrete tanks, not with a PIA approval. There is no additional safety mechanisms required for plastic tanks that are not required for concrete tanks.
.1402	123	18	This clause may be appropriate for consideration, as the Department should be available to judge alternative designs for identical performance. There are two types of partitions: monolithic and post-construction insertions. If the Department really chooses to judge on identical performance, the suggested language in (B) above would provide the performance guidelines.		Doug Lassiter, NCSTA, 9/20/2017	Agree
.1402	123	18 to 20	Delete (H)		ABCD Construction, 9/14/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Andrew Daywalt, 9/25/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Ben Hildreth, 9/25/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Brian Beebe, 10/23/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.

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.1402	123	18 to 20	Delete (H)		Charles Driggers, Driggers Septic Tank, 9/25/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
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.1402	123	18 to 20	Delete (H)		Chris Hedrick, 9/25/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Chriscoe Bacchoe Service, 10/23/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Daniel Newsome, D&D Organic Farming, 10/24/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Danny Dennis, 10/23/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		David Murphy, DRM, 10/24/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Donald Martin, 10/23/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
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.1402	123	18 to 20	Delete (H)		Hank Hill Grading, 10/23/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
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.1402	123	18 to 20	Delete (H)		Jerry Pearce, 9/15/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Johnny Strickland, 10/23/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Kearns Pumping Service, 10/23/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Keith Blackburn, B & C Concrete, 9/20/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Kippy Blanks, 9/28/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Larry Beam, 9/23/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Lawrence Henning, 9/15/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
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.1402	123	18 to 20	Delete (H)		Mark Johnson, 10/23/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Marty Maness, 11/23/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Michael Barger, 9/25/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Parrish Homes and Pools,Inc, 10/23/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Pat Rentz, VIP Inspection Services, 9/25/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Perry's Grading & Septic Service, 9/14/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Randy Lackey, Love Valley Septic, 9/25/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.

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.1402	123	18 to 20	Delete (H)		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Ronnie Burgin, 9/25/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Russell C. Trodgon, 9/18/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Russell Lineberry, 10/23/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Sterlin Church, Church's Backhoe Service, 9/25/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Steve Cannon, Rowan LHD, 9/25/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Terry Maples, 10/23/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		TM Grading, Inc, 10/23/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Tyler Jolley, 9/15/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Valentina Oxendine, 10/23/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Vince Scroggins, 9/14/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	18 to 20	Delete (H)		Willilam Garrison, EcoClean Septic, 9/25/2017	Disagree. Language allows for alternative baffle wall designs to be proposed. This language is also currently in the .1900 rules. Allows a manufacturer design alternatives.
.1402	123	25	(d) (16) tank lids and riser covers shall be locked, secured, or weigh 40 pounds, but no more than 80 pounds. change to tank lids shall be locked, secured, or weigh between 40 and 80 pounds, and riser covers shall be locked, secured, or weigh between 40 and 80 pounds		Joe Lynn, 10/31/2017	Disagree. We believe the proposed language says the same thing as what is in the draft rules.
.1402	123	33 to 34	Page 123 lines 33 and 34 state “the access opening over the pump shall have a nominal clear opening of 24 inches in diameter or other equidimensional opening”. We are happy to see the term “nominal” applied so that various 24” risers and riser materials are not excluded because they are slightly less than 24”. However, later on, on page 124 lines 31 and 32 state “tanks shall have a watertight access opening over each siphon with a minimum diameter of 24 inches, extending to finished grade, and designed to prevent surface water inflow.” The key term here is “minimum”, where we believe that it should be “nominal” instead as it was on page 123.		Gary Koteskey, Sim/Tech Filter, Inc, 10/31/2017	Agree

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1402	124		Create a table for ST, PT, GT dimensional requirement.		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. We do not see where this will add anything to the draft rules.
.1402	124	3	Inter compartment vent at top required		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	No, that is not the only method approved for venting.
.1402	124	8	With proposed 18 inch liquid and holes below it - second compartment cannot properly vented which is more important		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	The liquid level in the tank has been reduced to 12 inches, which is the current requirement. To our knowledge, there has not been any problems documented with the current tank venting process.
.1402	124	8	Separately ensure venting thru ST then house. Consider venting PT always.		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. Have not had problems that require pump tank to be vented separately.
.1402	124	12	If might be worthwhile to include a requirement that Grease Interceptors installed in parking areas proximate to food service establishments or areas with vehicle access, must be traffic rated or installed using methods PE approved to provide traffice rated load bearing capacity.		Bruce Stowe, RGP, 10/31/2017	Agree. That is covered in Rule .1403(4).
.1402	124	13	Measured from tank bottom or liquid surface?		Bruce Stowe, RGP, 10/31/2017	Agree
.1402	124	16	Measured from tank bottom or liquid surface?		Bruce Stowe, RGP, 10/31/2017	Agree
.1402	124	21	Venting? GT and ST with all filters installed need to be verified		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Venting is verified during the final inspection.
.1402	124	27	Recommend diagram for clarifications of design criterion as needed		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Disagree. A diagram has not been needed in the past to design a siphon dosing tank. There is no indication that one is needed currently to design a siphon dosing tank. Also, siphon tanks are not designed every day. They are a irregular occurrence. If someone has a question as to the design, they can call OSWP.
.1403	125		TANK MATERIAL REQUIREMENTS NEED TO HAVE PROTOCOL FOR FIBER-REINFORCED CONCRETE USE IN LIEU OF 6X6 10 GAGE WWF.	KEEP THE LANGUAGE SIMPLE, NOT TOO PRESCRIPTIVE. REFER TO CURRENT POSITION PAPER, REQUIRE DEMONSTRATION OF 300 PSF +	Doug Lassiter, NCSTA, 10/24/2017	Agree
.1403	125	2	IN (a) THE DEFINITION OF SEPTIC TANK NEEDS TO BE CHANGED TO BE CONSISTENT WITH THE OTHER PARTS OF THE RULES.	CHANGE THE DEFINITION TO READ "TANKS DESIGNED FOR USE IN THESE RULES SHALL BE WATERTIGHT AND CAPABLE OF WITHSTANDING A UNIFORM LIVE LOAD OF 300 PSF IN ADDITION TO ALL LOADS TO WHICH AN UNDERGROUND STRUCTURE IS NORMALLY SUBJECTED.	Doug Lassiter, NCSTA, 10/24/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		ABCD Construction, 9/14/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Andrew Daywalt, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Ben Hildreth, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Brian Beebe, 10/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Agree

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.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Cable Septic and Backhoe Service, 10/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Charles Dodge, C&C Septic Services, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Charles Driggers, Driggers Septic Tank, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Charlie Brice, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Chris Hedrick, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Chriscoe Bacchoe Service, 10/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Daniel Newsome, D&D Organic Farming, 10/24/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Danny Dennis, 10/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		David Murphy, DRM, 10/24/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Donald Martin, 10/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Garland Walker, 10/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Gerald Leonard, 10/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Hank Hill Grading, 10/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Harry Hatcher, 9/25/2017	Agree

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.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Jeff Link, Rowan, LHD, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Jerry Pearce, 9/15/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Johnny Strickland, 10/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Kearns Pumping Service, 10/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Keith Blackburn, B & C Concrete, 9/20/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Kippy Blanks, 9/28/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Larry Beam, 9/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Lawrence Henning, 9/15/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Lester Breedlove, 10/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Mark Johnson, 10/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Marty Maness, 11/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Michael Barger, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Parrish Homes and Pools,Inc, 10/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Pat Rentz, VIP Inspection Services, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Perry's Grading & Septic Service, 9/14/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Randy Lackey, Love Valley Septic, 9/25/2017	Agree

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.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Ronnie Burgin, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Russell C. Trodgon, 9/18/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Russell Lineberry, 10/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Sterlin Church, Church's Backhoe Service, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Steve Cannon, Rowan LHD, 9/25/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Terry Maples, 10/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		TM Grading, Inc, 10/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Tyler Jolley, 9/15/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Valentina Oxendine, 10/23/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Vince Scroggins, 9/14/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Agree
.1403	125	2 to 3	First sentence should be revised as follows: "(a) Tanks designed to hold sewage shall be constructed of materials capable of being structurally sound, watertight, and not subject to excessive corrosion or decay."		Willilam Garrison, EcoClean Septic, 9/25/2017	Agree
.1403	125	2	As mentioned in other parts of this proposal, the first rule should be consistent with the language describing the underground structure, its design, and its construction. This paragraph should be re-worked to be consistent with other parts of the draft.	Suggested language - "Tanks shall be watertight, structurally sound, and not subject to excessive corrosion or decay. Tanks and tank lids shall be approved upon a demonstartion of its ability to withstand a minimum uniform live load fo 300 pounds per square foot in addition to all loads to which an underground tank is normally subjected, such as dead weight of the material and soil cover, active soil pressure on tank walls, and the uplifting force of groundwater."	Doug Lassiter, NCSTA, 9/20/2017	Agree in concept. The term "structurally sound" has been defined and included in the definitions. This rule has been revised to include the term structurally sound.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1403	125	7	I noticed that there is mention of concrete septic tanks with wire reinforcement and the light-weight fiberglass tanks but I see no mention of the concrete septic tanks with fiberglass reinforcement that they have started making. For servicing the tanks, the wire reinforcement was easy to pick up with a metal detector for those tanks that had no risers coming to above ground level. The concrete tanks with the fiberglass reinforcement are somewhat harder to locate, at times. I like the idea of putting some kind of marker over the access lids (both ends) for tanks whose accesses do not come to the surface.		Bill Hardee, Hardee's Septic Tank Service, 10/9/2017	Agree. That is required in G.S. 130A-335.1(b)(5).
.1403	125	7	The use of fiber in septic tanks was omitted in the proposed changes.	The language needs to be in the rules stating that the use of fiber is an accepted reinforcement of tanks.	Keith Blackburn, B & C Concrete, 9/20/2017	Agree
.1403	125	7, 29, and 30	These paragraphs further indicate the lengths the Department separates the design and manufacture of tanks of different materials. Paragraph (a) for reinforced precast concrete tanks is prescriptive and offer authorized agents the description of how to inspect the precase concrete tank. Paragraphs (b) and (c) is an approval by reference, with no description of how to verify the quality of these tanks. The Department has also informed the authorized agents that they lack the expertise or equipment to test these tanks. When does the Department anticipate that this unequal treatment should be remedied and there is education for the authorized agents in training?		Doug Lassiter, NCSTA, 9/20/2017	This rules shows that the State understands that not all materials can be treated exactly the same. If the NCSTA would like, the State can incorporate ASTM C1227, and other standards, that would be similar to what is proposed for thermoplastic and glass-fiber-reinforced tanks.
.1403	125	10 to 14	Delete lines 12, 13, and 14	Add the following language - "Other methods and materials for achieving the required uniform live loads specified in this subsection shall be considered and approved by the State. Reinforcement shall be placed to achieve erquired structural integrity."	Doug Lassiter, NCSTA, 10/2/2017	Agree with modifications
.1403	125	19	One of the problems facing the quality of precast concrete tank manufacturers is the transporting of insufficiently cured tanks. While it is a fact that the authorized agents could test any tank at the site they feel does not meet the 3500 psi at 28 day standard, this responsibility is not being adequately done. In other words, the current rule is sufficient but the rules are not being enforced. The tank yards should be routinely inspected for tank quality, including sufficient inventory to indicate that proper curing is being achieved. This visit is not being done in most of the counties, and the Department has not instituted an equal program of inspection.	Place in the responsibility subsection the development of an equal inspection program for all manufacturers by the Department, in conjunction with the local health departments. This program should include the pre-inspection of tanks at the place of manufacture by local health departments or by approved QA programs.	Doug Lassiter, NCSTA, 9/20/2017	Agree and disagree. It should be the responsibility of the tank manufacturer, the LHD, and the State to ensure that the tank installed meets the requirements of the rules. The State plans to gear the tank yard inspection program back up once the rule making process is complete.
.1403	125	19	Compressive strength of 4,000 psi is new and excessive		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree
.1402	125	25	Page 123 line 25 states “tank lids and riser covers shall be locked, secured, or weigh 40 pounds, but no more than 80 pounds”. There is an ASTM spec that can be reference here, ASTM 1227 07-C, that other codes use and that spec references 59 pounds as the minimum weight.		Gary Koteskey, Sim/Tech Filter, Inc, 10/31/2017	Disagree. The minimum weight was based on feedback from operators and LHD staff regarding minimum weight that could be lifted with known equipment available.
.1403	125	27	SENTENCE STRUCTURE NEEDS CLARIFICATION. TANK LIDS AND RISER COVERS IN THIS SUBSECTION APPEAR TO BE JUST FOR LIDS AND COVERS MADE OF CONCRETE, BUT IS NOT FOUND IN LIDS AND RISER COVERS OF OTHER MATERIALS. SHOULD ALSO BE "A HANDLING DEVICE EQUIVALENT IN STRENGTH TO A #3 REBAR." SAYING A "HANDLE OF STEEL" IS CONFUSING.		Doug Lassiter, NCSTA, 10/24/2017	Agree with modifications
.1403	125	27	This sentence needs to be reworked.	"Tank lids and riser covers shall have a durable handle made of materials resistant to decal and capable of pull capacity for the weight of the lid or cover."	Doug Lassiter, NCSTA, 9/20/2017	Agree
.1403	125	29	Reference .0805(a)(1) 3rd QA/QC program		Bruce Stowe, RGP, 10/31/2017	Agree

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1403	125	29	The draft rules mix requirements for thermoplastic tanks between IAPMO/ANSI Z1000 and CSA B66 (certification). Both standards include materials standards, but CSA B66 includes a physical strength test requirement, while IAPMO/ANSI Z1000 does not. Requiring certification under CSA B66 achieves the same end result as requiring conformance with IAPMO and CSA certification.	Modify text to reference only the CSA B66 standard, consistent with current-day Branch thermoplastic tank policy.	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Agree
.1403	125	29	Change to: Thermoplastic tanks shall either be IAMPO/ANSI Z1000 or CSA B66 Certified and meet all performance standards, testing, processes and approvals of Subchapter 18E and; (1) long term creep and damage monitoring		Latt Moretz, Molds of Bethlehem, Inc, 10/6/2017	Agree with modifications. The language has been changed to require that plastic tanks are B66 certified. B66 is a higher standard which includes a test to determine the environmental stress crack resistance. This test evaluates the stress on a specimen of the plastic tank over time. This is a measure of the materials subjectivity to cracking (or brittleness). While it is not the same as long term creep, it does measure the tank material under low stress over a period of time. We do not know of any mechanism for monitoring of long term creep and damage. There are a number of tests that will evaluate a material specimen for these properties, but not the tank itself. As part of the third party quality assurance program, the material will continue to be evaluated to verify that is meets the minimum material properties specified in the rules. Additionally, if we did test plastic tanks for long term creep, we should test all plastic materials used in on-site wastewater systems for long term creep, such as pipe, risers, distribution boxes, etc, since it is a plastic issue. To our knowledge, we have not had problems with these other plastic materials to indicate this is an issue, so there is no reason to believe it would be just a plastic tank issue.
.1403	125	30	(d): Change to: Glass-fiber-reinforced tanks shall meet all performance standards, testing , processes and approvals of Subchapter 18E and; 1. all external surfaces shall have a minimum thickness of 0.2 inches. The baffle wall shall be a minimum 3/16-inches thick; and 2. materials and laminate requirements specified in IAMPO/ANSI Z1000 for glass-fiber-reinforced tanks; and 3. long term creep and damage monitoring.		Latt Moretz, Molds of Bethlehem, Inc, 10/6/2017	Agree with modifications. The language has been changed to require that fiberglass tanks are enrolled in a third party quality assurance program which includes material testing. We do not know of any mechanism for monitoring of long term creep and damage. There are a number of tests that will evaluate a material specimen for these properties, but not the tank itself. As part of the third party quality assurance program, the material will continue to be evaluated to verify that is meets the minimum material properties specified in the rules. Additionally, if we did test fiberglass tanks for long term creep, we should test all fiberglass materials used in on-site wastewater systems for long term creep, including risers, distribution boxes, etc, since it can be a fiberglass issue. To our knowledge, we have not had problems with these other fiberglass materials to indicate this is an issue, so there is no reason to believe it would be just a fiberglass tank issue.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		ABCD Construction, 9/14/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Andrew Daywalt, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Ben Hildreth, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Brian Beebe, 10/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Cable Septic and Backhoe Service, 10/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Charles Dodge, C&C Septic Services, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Charles Driggers, Driggers Septic Tank, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Charlie Brice, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Chris Hedrick, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Chriscoe Bacchoe Service, 10/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Daniel Newsome, D&D Organic Farming, 10/24/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Danny Dennis, 10/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.

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.1404	126	15	Change four inches to five inches, change five minutes to two minutes		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		David Murphy, DRM, 10/24/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Donald Martin, 10/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Garland Walker, 10/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Gerald Leonard, 10/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Hank Hill Grading, 10/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Harry Hatcher, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Jeff Link, Rowan, LHD, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Jerry Pearce, 9/15/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Johnny Strickland, 10/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Kearns Pumping Service, 10/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Keith Blackburn, B & C Concrete, 9/20/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Kippy Blanks, 9/28/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Larry Beam, 9/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Lawrence Henning, 9/15/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Lester Breedlove, 10/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Mark Johnson, 10/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Marty Maness, 11/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Michael Barger, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Parrish Homes and Pools,Inc, 10/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Pat Rentz, VIP Inspection Services, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Perry's Grading & Septic Service, 9/14/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Randy Lackey, Love Valley Septic, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.

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.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Ronnie Burgin, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Russell C. Trodgon, 9/18/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Russell Lineberry, 10/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Sterlin Church, Church's Backhoe Service, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Steve Cannon, Rowan LHD, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Terry Maples, 10/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		TM Grading, Inc, 10/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Tyler Jolley, 9/15/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Valentina Oxendine, 10/23/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Vince Scroggins, 9/14/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	15	Change four inches to five inches, change five minutes to two minutes		Willilam Garrison, EcoClean Septic, 9/25/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1404	126	16	This comment was submitted previously by the Wastewater System Manufacturers Stakeholder Group, but was not addressed. Its is being resubmitted. A vacuum of 5 inches of mercury is required on risers "without deformation". Engineered structures are deformable (Mechanics of Materials, Beer and Johnston, 1981), thus when placed under a stress, strain will occur, which can be measured as a deformation. Achieving zero deformation under a 5-inch Hg applied vacuum-induced force, as prescribed in the proposed rule, is impossible for any material of construction (e.g., concrete, steel, titanium, carbon, plastic) and defies widely accepted engineering mechanics-of-materials principles. In other words, the requirement contains an impossible requirement to meet.	Modify text as shown: Documentation by a third-party of structural testing to five inches of mercury without permanent deformation or failure.	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Agree with modifications. The requirement for proof testing has been removed. The manufacturer has been asked to provide documentation that the riser can withstand the required loads.
.1404	126	18	Why do the rules require a secondary lid over effluent filters in septic tanks? The effluent filter itself will prevent accidental entry. The language in this rule should be revised.		Bill Fenner, Aquapoint, 10/29/2017	Agree in concept that the effluent filter should prevent accidential entry, but does not guarantee it. The requirement for a secondary lid is based on safety concerns.
.1404	126	20	Can primary and secondary be interpreted as locking outer lid/cover with secondary lid/net to protect from unauthorized/accidental entry?		Bruce Stowe, RGP, 10/31/2017	Yes
.1404	126	20	"State approved primary and secondary..."	arbitrary. What specifications does the State require for these devices.	Joe Soulia, Orenco Systems, 10/31/2017	Agree
.1404	126	20	"State approved primary and secondary..."	arbitrary. What specifications does the State require for these devices.	Steve Barry, AQWA, 10/31/2017	Agree
.1404	126	36	This rule mandates that every septic tank have 3 inlet openings. This should be a manufacturer's decision. Multiple sources can be combined in a manhole or with plumbing preceding the septic tank. Requiring every tank to have 3 inlets and requiring every inlet penetration to be cast with a flexible sleeve will result in unnecessary tank penetrations that have to be sealed. Tanks should be required to have only a single inlet on the tank end and allowed up to have inlets on the sidewalls if desired.		Bill Fenner, Aquapoint, 10/29/2017	Agree
.1404	126	36	See comment/question .1402(d)(7) & (8)		Bruce Stowe, RGP, 10/31/2017	Agree
.1404	127	1	reapprove of pipe penetration and seals		Glenn Hines, 10/29/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12	a. The product renewal criteria places an undue burden on manufacturers to perform certain regulatory tasks which are the under the authority of the Department or county agency to perform. The criteria also place as undue financial burden on manufacturers in a variety of ways. The impact for North Carolina citizens will be more costly systems in order to account for the additional burdens placed on manufacturers. b. The goal of the product renewal sections appear to be a method to de-list components or systems. If the Department feels there is not sufficient ability to do this under the current regulations, then criteria could be developed that specifically address de-listing of components or products rather than having to continually renew approvals on components or products that have long-term track record of compliance. In essence, let's not penalize the good ones.		Colin Bishop, Anua, 10/31/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12	RISERS, EFFLUENT FILTERS, AND PIPE PENETRATION APPROVALS SHOULD REMAIN IN EFFECT UNTIL THE MANUFACTURER SEEKS TO AMEND THEIR APPROVAL. THIS PROPOSAL WOULD DRAW MANPOWER FROM THE STATE THAT COULD BE USED BETTER ELSEWHERE	ELIMINATE .1405	Doug Lassiter, NCSTA, 10/24/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.

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.1405	127	12	This is unnecessary. The approvals for risers, effluent filters, and pipe penetrations should be non-expiring. The manufacturer should update their approval when changes are made to their product. The approvals would be suspended or revoked if the product is altered or found defective. The protocol of setting expiration limits and reapproval procedures would be tasking the staff whose efforts should be directed onto more important areas. According to the Fiscal Note from the Department, this renewal protocol adds on average less than $500 annually to the State.	Eliminate this rule	Doug Lassiter, NCSTA, 9/20/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12	Another issue that needs addressing, APPROVALS of manufactured products sold and installed in our state. Over time company's are bought and sold quite often it appears. Some times quality standards get compromised. I think we need have the right to review these products on a regular basis. That's not to say do a complete review, if a product is performing like the manufacture claimed it would when first approved, let them continue. However if industry professionals have some documented complaints, the product needs to be reviewed, contact the manufacturer and give the opportunity to correct the issues. If they cannot correct the issue OR refuses to correct the issue, then address it as need be.		Keith Vernon, Vernon Septic Systems, 10/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12	Rule .1405	We would like to see this section eliminated. This seems very costly to the manufacturer, which would be passed to the contractor and then the consumer. The manufacturer should update their approval when changes are made to their products.	NC Home Builders Assn, 10/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		ABCD Construction, 9/14/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Andrew Daywalt, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Ben Hildreth, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Brian Beebe, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.

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.1405	127	12 to 20	Delete		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Cable Septic and Backhoe Service, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Charles Dodge, C&C Septic Services, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Charles Driggers, Driggers Septic Tank, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Charlie Brice, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Chris Hedrick, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Chriscoe Bacchoe Service, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Daniel Newsome, D&D Organic Farming, 10/24/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Danny Dennis, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.

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.1405	127	12 to 20	Delete		David Murphy, DRM, 10/24/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Donald Martin, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Garland Walker, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Gerald Leonard, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	waste of time and man power		Glenn Hines, 10/29/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Hank Hill Grading, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Harry Hatcher, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Jeff Link, Rowan, LHD, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.

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.1405	127	12 to 20	Delete		Jerry Pearce, 9/15/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Johnny Strickland, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Kearns Pumping Service, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Keith Blackburn, B & C Concrete, 9/20/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Kippy Blanks, 9/28/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Larry Beam, 9/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Lawrence Henning, 9/15/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Lester Breedlove, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Mark Johnson, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Marty Maness, 11/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Michael Barger, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.

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.1405	127	12 to 20	Delete		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Parrish Homes and Pools,Inc, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Pat Rentz, VIP Inspection Services, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Perry's Grading & Septic Service, 9/14/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Randy Lackey, Love Valley Septic, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Ronnie Burgin, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Russell C. Trodgon, 9/18/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Russell Lineberry, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Sterlin Church, Church's Backhoe Service, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.

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.1405	127	12 to 20	Delete		Steve Cannon, Rowan LHD, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Terry Maples, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		TM Grading, Inc, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Tyler Jolley, 9/15/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Valentina Oxendine, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Vince Scroggins, 9/14/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1405	127	12 to 20	Delete		Willilam Garrison, EcoClean Septic, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last three years.
.1406	127	26 to 36	needs to be rewritten (state job to enforce codes not suspend)		Glenn Hines, 10/29/2017	Disagree. If the State determines that a product is not meeting the requirements of the rules, the State should be able to suspend or revoke a product approval. That is part of being able to enforce the rules, having the ability to deny a product to be used.
.1500	127 to 130		elimate the entire performance approvals of RWTS.this is already done by NSF. This section needs rewrite for approval by NSF		Glenn Hines, 10/29/2017	Understand comment. Outside of the units themselves, there are other items, such as control panels and tanks, that might not meet current NC rules. Some level of review must occur to ensure that the product does meet all the rules in NC and is not given a pass on something that other manufacturers are required to meet.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1501	128	11	DSE? NSF tested for 350 BOD and 350 TSS		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Domestic strength effluent not high strength wastewater. The limits for domestic strength effluent have been reduced to more accurately reflect the values found in the field.
.1502	128		In the definitions, a RWTS is defined as a residential wastewater treatment system. This sentence occurs more than once. If you will be using NSF standards, it needs to be recognized that the ANSI accredited labs need to be 'arms length apart". IE. Norweco has owner affiliation with an ANSI lab and should not be considered "THIRD PARTY".		Mike Stidham, E-Z Treat, 10/31/2017	Agree with concept. However, we are not able to police the accrediting labs and determine who is an owner and should or should not be testing a product. That is outside the scope of what is within our ability to regulate.
.1503	129	11	The liquid capacity of the required settling tank for RWTS systems is specified to be half of the design flow. Since these systems are restricted to design flows < 1,500 gpd the maximum settling (septic) tank volume is 750 gal. This is substantially less than the minimum volume required for other types of systems: • Sec .0801(a)(1) specifies a minimum septic volume of 1,000 gal. • Sec .0801 Table XIII requires a septic tank volume of 1,000 gal for a 4 bedroom application and 1,250 gal for a 5 bedroom application. • Sec .0801 Table XIV requires a septic tank volume of 1.17Q+500 for residential flows from 600 gpd to 1500 gpd. (this would be 1342 gal to 2255 gal). The requirement for RWTS septic tanks should be consistent with the rules for minimum septic tanks.		Bill Fenner, Aquapoint, 10/29/2017	Disagree. The settling tank capacity is approved by NSF as part of the RWTS package. RWTS are approved based on NSF-40 and minimal other criteria. Additionally, the language for the size of the settling tank was reached with RWTS industry as a compromise based on previous language and the products as approved by NSF International.
.1503	129	27	"...malfunction or a high water condition..."	"...malfunction, to include a pressure loss on the air supply line, and a high water alarm..." For almost all RWTS a loss in air flow will reduce treatment efficiency within minutes. The only significant measurable malfunction is a loss in air pressure. This can be caused by the blower going out, clogging of the air line, or breakage of the air line.	Joe Soulia, Orenco Systems, 10/31/2017	Disagree. If this requirement is not already part of the NSF approval, we do not see a need to include it in our rules. These approvals are based on NSF approval. The only other items we review in detail are the tanks and control panel/eletrical to verify that these meet the rules in North Carolina. Additionally, we have not see a problem with this that would dictate the need for this to be included.
.1503	129	27	"...malfunction or a high water condition..."	"...malfunction, to include a pressure loss on the air supply line, and a high water alarm..." For almost all RWTS a loss in air flow will reduce treatment efficiency within minutes. The only significant measurable malfunction is a loss in air pressure. This can be caused by the blower going out, clogging of the air line, or breakage of the air line.	Steve Barry, AQWA, 10/31/2017	Disagree. If this requirement is not already part of the NSF approval, we do not see a need to include it in our rules. These approvals are based on NSF approval. The only other items we review in detail are the tanks and control panel/eletrical to verify that these meet the rules in North Carolina. Additionally, we have not see a problem with this that would dictate the need for this to be included.
.1503	129	33	Why do RWTS have one half the desing daily flow for the settling tank?		Bill Fenner, Aquapoint, 10/2/2017	The settling tank capacity is approved by NSF as part of the RWTS package. RWTS are approved based on NSF-40 and minimal other criteria. Additionally, the language for the size of the settling tank was reached with RWTS industry as a compromise based on previous language and the products as approved by NSF International.
.1504	130	10	"...grab or composite sampled..."	"...grab or 24 hour composite sampled..." Clarification required. Use something other than 24 hours if you like, but it needs to have a time associated or do it as flow proportional.	Joe Soulia, Orenco Systems, 10/31/2017	Agree
.1504	130	10	"...grab or composite sampled..."	"...grab or 24 hour composite sampled..." Clarification required. Use something other than 24 hours if you like, but it needs to have a time associated or do it as flow proportional.	Steve Barry, AQWA, 10/31/2017	Agree

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.1505	130	18	a. The product renewal criteria places an undue burden on manufacturers to perform certain regulatory tasks which are the under the authority of the Department or county agency to perform. The criteria also place as undue financial burden on manufacturers in a variety of ways. The impact for North Carolina citizens will be more costly systems in order to account for the additional burdens placed on manufacturers. b. The goal of the product renewal sections appear to be a method to de-list components or systems. If the Department feels there is not sufficient ability to do this under the current regulations, then criteria could be developed that specifically address de-listing of components or products rather than having to continually renew approvals on components or products that have long-term track record of compliance. In essence, let's not penalize the good ones.		Colin Bishop, Anua, 10/31/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18	RWTS APPROVALS SHOULD NOT HAVE A FINITE EXPIRATION. THIS IS UNNECESSARY AND BURDENSOME TO THE MANUFACTURER, MANY OF THEM SPENT OVER 5 YEARS TRYING TO GET THE FIRST APPROVAL. THE REQUIRED O & M OF THE SYSTEM SHOULD GIVE A PERFORMANCE BASE TO SUSPEND OR REMOVE THE APPROVAL. STATE MANPOWER CAN BE USED MORE EFFECTIVELY ELSEWHERE	ELIMINATE .1505	Doug Lassiter, NCSTA, 10/24/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18	All products and systems approved in North Carolina should not have to follow such a protocol. The current system of approvals, with operator and authorized agent reports on the wastewater systems should be sufficient. The approvals already instruct the manufacturer to amend their approval with any changes prior to sale, and gives the procedures for suspension and revocation. With the reported short-staffing and stretched manpower that the Department insists they work with, the renewal of approvals are just adding to their problem.	Eliminate this rule	Doug Lassiter, NCSTA, 9/20/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18	Another issue that needs addressing, APPROVALS of manufactured products sold and installed in our state. Over time company's are bought and sold quite often it appears. Some times quality standards get compromised. I think we need have the right to review these products on a regular basis. That's not to say do a complete review, if a product is performing like the manufacture claimed it would when first approved, let them continue. However if industry professionals have some documented complaints, the product needs to be reviewed, contact the manufacturer and give the opportunity to correct the issues. If they cannot correct the issue OR refuses to correct the issue, then address it as need be.		Keith Vernon, Vernon Septic Systems, 10/25/2017	Have modified the approval renewal process to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18	Rule .1505	Setting an expiration date on approved products and systems for 5 years. This seems very costly to the manufacturer, which would be passed on to the contractor and then the consumer. Delete these sections of the calendared date of expiration.	NC Home Builders Assn, 10/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18	Residential Wastewater Treatment System approvals should not have to be renwed every 5 years. There are rules in place to revoke the approvals. By having this in the rules would add unnecessary cost to the consumer and is unnecessary to protecting public health since rules are already in place to revoke approvals.	Eliminate this rule	Russ Ayers, Bennie Moore Septic Tank, 9/20/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.

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.1505	130	18 to 29	Delete		ABCD Construction, 9/14/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Andrew Daywalt, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Ben Hildreth, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Brian Beebe, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Cable Septic and Backhoe Service, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Charles Dodge, C&C Septic Services, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Charles Driggers, Driggers Septic Tank, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Charlie Brice, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.

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.1505	130	18 to 29	Delete		Chris Hedrick, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Chriscoe Bacchoe Service, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Daniel Newsome, D&D Organic Farming, 10/24/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Danny Dennis, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		David Murphy, DRM, 10/24/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Donald Martin, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Garland Walker, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.

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.1505	130	18 to 29	Delete		Gerald Leonard, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Hank Hill Grading, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Harry Hatcher, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Jeff Link, Rowan, LHD, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Jerry Pearce, 9/15/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Johnny Strickland, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Kearns Pumping Service, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Keith Blackburn, B & C Concrete, 9/20/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Kippy Blanks, 9/28/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Larry Beam, 9/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Lawrence Henning, 9/15/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1505	130	18 to 29	Delete		Lester Breedlove, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Mark Johnson, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Marty Maness, 11/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Michael Barger, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Parrish Homes and Pools,Inc, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Pat Rentz, VIP Inspection Services, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Perry's Grading & Septic Service, 9/14/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Randy Lackey, Love Valley Septic, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1505	130	18 to 29	Delete		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Ronnie Burgin, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Russell C. Trodgon, 9/18/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Russell Lineberry, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Sterlin Church, Church's Backhoe Service, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Steve Cannon, Rowan LHD, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Terry Maples, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		TM Grading, Inc, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Tyler Jolley, 9/15/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Valentina Oxendine, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Vince Scroggins, 9/14/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1505	130	18 to 29	Delete		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1505	130	18 to 29	Delete		Willilam Garrison, EcoClean Septic, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1600			It is apparent that certain technologies are being written into the rules. Prefabricated permeable block and panel systems, Drip systems, and underground sand filters are being written into the rules. Drip manufacturers are Geoflow and Netafin. Approvals by American, EZ TREAT, Delta etc. are by system integrators. We purchase pieces and parts from the Manufacturers and assemble proprietary system products under current approvals. These approvals are approved by the Department for continuity and function. The rule relieves accountability for any system integrator and creates a “finger pointing contest”. Each system integrator should be evaluated and approved upon a system and not a piece and part conglomeration. Furthermore, no technology should have a rule application and should be stand alone approvals. IE. Presby, Elgen, and T and J Panel. The proposed rules for Drip are way extensive and the LPP systems are very broad. The hydraulics should be similarly evaluated.		Mike Stidham, E-Z Treat, 10/31/2017	Disagree. OSWP told the entire world over ten years ago that we wanted to include drip dispersal systems in the rules. The idea was to centralize all the sizing and siting criteria in one place and to treat all drip manufacturers the same. Additionally, by identifying design criteria, for PE designs that are not a pre-packaged/engineered system, we have now identified the minimum design criteria that must be met. PPBPS and LDP have been in the rules for years, before the I&E approval process came about. This rule allows manufacturers to take the parts and pieces they chose and create a pre-approved drip package that has general approval. The rule does not relieve accountability for the system integrator. And, all pre-packaged systems will still need a PIA approval. We are just trying to simplify and standardize the process.
.1601	131	20 to 21	Not sure what “ongoing” means		Tom Ashton, American Manufacturing Company, 10/31/2017	Agree and removed
.1602	132	2	Reuse?		Ishwar Devkota, Wake County Environmental Services, 10/2/2017	Agree with adding reclaimed water to the proposed rules. Reclaimed water has been added to Rule .1002.
.1602	132	34	"...to a separate settling..."	"...to the septic tank, a separate settling tank.... Most systems don't have a separate settling tank. All systems have a septic tank. Returning flows here has been standard practice for over a decade.	Joe Soulia, Orenco Systems, 10/31/2017	Agree with modifications. RWTS utilize settling tanks with their units. The modification identifies all options available to the system designer.
.1602	132	34	"...to a separate settling..."	"...to the septic tank, a separate settling tank.... Most systems don't have a separate settling tank. All systems have a septic tank. Returning flows here has been standard practice for over a decade.	Steve Barry, AQWA, 10/31/2017	Agree with modifications. RWTS utilize settling tanks with their units. The modification identifies all options available to the system designer.
.1602	132	20 to 22	I think this is criteria from the continuous flush controlled demonstration criteria, and as such is non- applicable and of concern. Assuming automatic forward flushing at some appropriate, required fre- quency, returning to the head of the treatment train, if a pump has the ability to provide for flushing at 2 fps, why throttle it down to 1 fps in normal operation? Zone supply lines should be sized to provide 2 fps during field flushing.		Tom Ashton, American Manufacturing Company, 10/31/2017	This is based on the Geoflow drip approval. It allows for a lower flushing velocity with advanced pretreatment, but the operator can still achieve 2 ft per second with manual valving and flushing of individual drip zones. It is not just for continous flushing drip systems.
.1602	132	26 to 28	Referring to comment directly above, if filtration is required to accommodate field flushing flow then why throttle down to the lower velocity?		Tom Ashton, American Manufacturing Company, 10/31/2017	The flushing velocity is not required to be throttled down. The advanced pretreatment drip system is designed to have a flushing velocity of 1 ft/sec during normal operation. The system is required to be configured so that with the manual operation of valves, a singel drip zone can be manually flushed with a velocity of 2 ft/sec.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1602	132	33 to 34	Returning the filter cleaning and field flush residuals to a separate tank for primary settling prior to discharge to the pump tank is an appropriate practice for DSE effluents. It is not appropriated for pre- treated effluents due to the potential for compromising the effluent quality discharged to the soil treatment unit. These Section .1602 (d) as written, could be interpreted to allow for pretreated drip systems configured with continuous filter washing and continuous tubing network forward flushing with the residuals to depositing directly into the dosing chamber downstream from the treatment unit by way of an intermediary "primary settling chamber" for dispersal to the soil treatment unit…. downstream from the secondary treatment unit.		Tom Ashton, American Manufacturing Company, 10/31/2017	Agree and language has been modified
.1602	132	35 to 36	Recommend "The meter shall also be utilized to monitor flow rates during dosing and flushing events.."		Tom Ashton, American Manufacturing Company, 10/31/2017	Agree
.1602	133	4 to 6	Although pre-engineered systems should be able to provide for zones to be separately dosed, in larger flows and in the case of very high loading rates there may be a need to dual zone dose to reduce the total pump run time and / or provide for a more optimum operating point. Zones would be routinely forward flushed on an individual basis.		Tom Ashton, American Manufacturing Company, 10/31/2017	Agree with modifications
.1602	133	9	"shall be 0.05 percent or less"	"shall be 5% or less". We aren't asking for 99.995% precision in manufacturing a plastic part are we?	Joe Soulia, Orenco Systems, 10/31/2017	Agree
.1602	133	9	"shall be 0.05 percent or less"	"shall be 5% or less". We aren't asking for 99.995% precision in manufacturing a plastic part are we?	Steve Barry, AQWA, 10/31/2017	Agree
.1602	133	9 to 10	Does this criteria allow for the currently approved Netifim and Geoflow pressure compensating emitter?		Tom Ashton, American Manufacturing Company, 10/31/2017	Yes
.1602	133	31 to 37	In this section, SECTION .1600 – APPROVAL AND USE OF PREENGINEERED PACKAGE DRIP DISPERSAL SYSTEMS requirements for the approval of a pre-engineered proprie- tary system has elements of the "use" of drip dispersal systems that maybe cons crewed to mean that certain program elements and standards of practice would be the responsibility of the manufacturer of the system. Items (b) & (e) of this section regarding manifold cleanouts and isolation valves are examples.		Tom Ashton, American Manufacturing Company, 10/31/2017	Understand the comment, but disagree. This rule pertains to design and construction standards. The manufacturer would not be responsible for this. This is part of the overall system design. The manufacturer is responsible for the items identified in Rule .1601. Rule .1602 sets up general design criteria to be used by all drip systems and as a standard for a PE design that is not with a pre-approved package.
.1602	134	6 to 8	Recommend…."a projected average flow and accommodate the design daily flow".		Tom Ashton, American Manufacturing Company, 10/31/2017	Agree
.1602	134	10 to 11	This criterion is an absolute minimum and is a design criteria. Maybe some minimum volume (3.5x) of the tubing and this criteria? Each dose is a redistribution event. I recommend a statement such as in .1602 (e) (3) regarding appropriate dose volumes in consideration of "instantaneous emitter loading rates that do not exceed the hydraulic capacity of the receiving infiltrative surfaces".		Tom Ashton, American Manufacturing Company, 10/31/2017	Agree with modifications
.1602	134	12 to 13	What is NC experience? For a PREENGINEERED PACKAGE DRIP DISPERSAL SYSTEM at < 3000 GPD, with minimal operator oversite, filter flushing should be at the be at the beginning of each dose run. Larger systems, with pretreated effluent maybe able to backwash on volume dosed, or at pressure loss across the filtration assembly, but that is a project specific consideration.		Tom Ashton, American Manufacturing Company, 10/31/2017	Understand comment, but disagree. A PE can propose a filter flushing regime to match what the drip manufacturer recommends or justify something different based on the project specific design. This Section has been created to establish minimum criteria that can be used for all drip systems, with the understanding that a PE can propose something else based on the specific project and their knowledge.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1602	134	14 to 15	Again, what is NC experience? For a PREENGINEERED PACKAGE DRIP DISPERSAL SYSTEM at < 3000 GPD, with minimal operator oversite, minimum field network flush frequency should be required to adjustable at a minimum of one time per week. Larger systems, with pretreated effluent may be able to forward flush at a lesser frequency, at the manufacturer's concurrence, but that is a project specific consideration.		Tom Ashton, American Manufacturing Company, 10/31/2017	Understand comment, but disagree. A PE can propose a filter flushing regime to match what the drip manufacturer recommends or justify something different based on the project specific design. This Section has been created to establish minimum criteria that can be used for all drip systems, with the understanding that a PE can propose something else based on the specific project and their knowledge.
.1602	133	14 to 17	Section 1600 addresses APPROVAL AND USE OF PREENGINEERED PACKAGE DRIP DISPERSAL SYSTEMS. Why the concept of "project specific" approval regarding non-pressure compensating emit- ters in the rule? Engineers may propose what they want in the project specific arenia. To my knowledge non-pressure compensating emitters have not been demonstrated or evaluated in NC, and if so not nearly to the extent that pressure compensating emitters have.		Tom Ashton, American Manufacturing Company, 10/31/2017	Non-pressure compensating emitters have been approved and used in North Carolina. This criteria is similar to language in the PIA approval for non-pressure compensating emitters.
.1602	134	20 to 23	Recommend "for systems with a daily design flow greater than 3,000 gpd the controller shall monitor the flow to each zone, providing separate adjustable pressurized flow variation monitoring for standard doing operational conditions and provide for dosing disengagement for catastrophic conditions.		Tom Ashton, American Manufacturing Company, 10/31/2017	Understand concept of what is being proposed, but the language in the proposed rules mirrors the language in the drip innovative approvals. At this time, do not have sufficient reason to expand this requirement in the rules.
.1602	134	27 to 28	Recommend "controls and sensors (floats) are to be configured to assure the minimum dose is available prior to initiating a dosing cycle to the dispersal field and to provide that a full dose is delivered.		Tom Ashton, American Manufacturing Company, 10/31/2017	Agree
.1602	131 to 134		arbitrary oversight of drip when compared to LPP	Both drip and LPP are designed to deliver a fairly equal flow rate to the infiltrative surface. Why on earth are there so many requirements being put on drip systems and not LPP systems? Why not a flow meter on an LPP system? Why not telemetry on an LPP system?	Joe Soulia, Orenco Systems, 10/31/2017	Understand comment. However, drip irrigation is not the same as LPP. It is very difficult to measure drawdown with very low flows, such as with drip systems. Additionally, the control panel for LPP systems will now be required to have ETM and CC to determine flow to field. The ability for the use of telemetry is also being expanded in the proposed rules.
.1602	131 to 134		arbitrary oversight of drip when compared to LPP	Both drip and LPP are designed to deliver a fairly equal flow rate to the infiltrative surface. Why on earth are there so many requirements being put on drip systems and not LPP systems? Why not a flow meter on an LPP system? Why not telemetry on an LPP system?	Steve Barry, AQWA, 10/31/2017	Understand comment. However, drip irrigation is not the same as LPP. It is very difficult to measure drawdown with very low flows, such as with drip systems. Additionally, the control panel for LPP systems will now be required to have ETM and CC to determine flow to field. The ability for the use of telemetry is also being expanded in the proposed rules.
.1603	135	3 to 8	drip startup	add "D. Once the system is pressurized, flows dosing flows to each zone shall be recorded using the flow meter." The whole #2 just reads a little funny. Pressures and flows should be recorded to all zones.	Joe Soulia, Orenco Systems, 10/31/2017	Agree with modifications
.1603	135	3 to 8	drip startup	add "D. Once the system is pressurized, flows dosing flows to each zone shall be recorded using the flow meter." The whole #2 just reads a little funny. Pressures and flows should be recorded to all zones.	Steve Barry, AQWA, 10/31/2017	Agree with modifications
.1603	135	5	"measured at the lowest point on the supply manifold;"	"measured at the lowest point on the supply manifold and the highest point on the return". You need to measure at both points in order to yield the highest and lowest pressures to determine if you are in the 15-60 psi range.	Joe Soulia, Orenco Systems, 10/31/2017	Agree with modifications
.1603	135	5	"measured at the lowest point on the supply manifold;"	"measured at the lowest point on the supply manifold and the highest point on the return". You need to measure at both points in order to yield the highest and lowest pressures to determine if you are in the 15-60 psi range.	Steve Barry, AQWA, 10/31/2017	Agree with modifications

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.1701 to .1703	135-138		this section needs to rewrite without 6 to 24 month approvals for the state		Glenn Hines, 10/29/2017	Understand and agree. We have tried to rewrite this rule to streamline the process and clearly identify the information that is required to be provided to the State for approval.
.1701 to .1706	136-144		this section needs rewrite or elimate entirely.90 days for approval should be 15 days		Glenn Hines, 10/29/2017	Disagree. This is not a task that can be completed within 15 days. Sometimes the information submitted in support of the application can take at least three to four days to read, without trying to review and understand the technical concepts involved.
.1702	137	30 to 34	Non-proprietary PIA systems	Non-proprietary PIA systems. What about the manufacturer required reporting and operation and maintenance oversight for these systems? These requirements are being pushed on to industry. Who is responsible for these requirements in the case of non-proprietary PIA systems? The State?	Joe Soulia, Orenco Systems, 10/31/2017	Understand comment. We understand that OSWP will need to track and be responsible for some of this. We have modified language throughout this Section to address this issue.
.1702	137	30 to 34	Non-proprietary PIA systems	Non-proprietary PIA systems. What about the manufacturer required reporting and operation and maintenance oversight for these systems? These requirements are being pushed on to industry. Who is responsible for these requirements in the case of non-proprietary PIA systems? The State?	Steve Barry, AQWA, 10/31/2017	Understand comment. We understand that OSWP will need to track and be responsible for some of this. We have modified language throughout this Section to address this issue.
.1704	139	2	A system shall be approved for use as a Provisional System when all of the following criteria have been met". Using the word "all" in this statement indicates that all the criteria included in Lines 3 through 37 on Page 139 and Lines 1 through 34 on Page 140 must be met before a system can be approved for use as Provisional although "or" statements are included throughout the section. Meeting all the criteria as written would be impossible as some statements contradict each other.		Sheryl Ervin, Bio-Microbics, Inc, 10/31/2017	Agree. Rule has been rewritten to address this issue.
.1704	139	20	BASED ON THIS LANGUAGE, WHICH IS GOOD AND PROPER, THE USE OF THE EZ FLOW PRODUCT WOULD CONTINUE BY LAW NOT TO HAVE TO MEET THIS REQUIREMENT. HAS THIS LEGISLATION BEEN REMOVED?	CONSIDER REWORDING THIS LANGUAGE TO MAKE THE MARKET EQUAL.	Doug Lassiter, NCSTA, 10/24/2017	Disagree. EZflow and FlowTech both had to submit documentation to show that they met this requirement. The addition of this language to is clarify information that is already submitted.
.1704	139	25	Item (3)(A) states "50 complete third-party field verification data sets from 15 sites in operation for six months,". Add a qualifier that both in-state and out-of-state data sets are acceptable.		Sheryl Ervin, Bio-Microbics, Inc, 10/31/2017	Agree
.1705	141	4	"A system shall be approved for use as an Innovative System when all of the following criteria have been met". Using the word "all" in this statement indicates that all the criteria included in Lines 5 through 37 on Page 141 and Lines 1 through 101 on Page 142 must be met before a system can be approved for use as Innovative although "or" statements are included throughout the section. Meeting all the criteria as written would be impossible as some statements contradict each other.		Sheryl Ervin, Bio-Microbics, Inc, 10/31/2017	Agree. Rule has been rewritten to address this issue.
.1705	142	1	"operation for six..."	"operation for eighteen...". Six months is not NEARLY long enough to determine the effective operation of a system. In fact, nitrogenous bacteria sometimes take months to simply establish themselves. Even a septic tank is barely mature in 6 months.	Joe Soulia, Orenco Systems, 10/31/2017	Understand the comment, but disagree. With the other requirements in this paragraph the advanced pretreatment system would need to be in operation at least one year to pull the samples as required.
.1705	142	1	"operation for six..."	"operation for eighteen...". Six months is not NEARLY long enough to determine the effective operation of a system. In fact, nitrogenous bacteria sometimes take months to simply establish themselves. Even a septic tank is barely mature in 6 months.	Steve Barry, AQWA, 10/31/2017	Understand the comment, but disagree. With the other requirements in this paragraph the advanced pretreatment system would need to be in operation at least one year to pull the samples as required.

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.1709	145	25	Item (b) states “sampled quarterly for all applicable influent”. Influent parameters are not defined so there is no indication of what parameters and the required levels are required for the testing process.		Sheryl Ervin, Bio-Microbics, Inc, 10/31/2017	Agree
.1709	145	27 to 28	Item (c) states “sampled annually for all applicable influent”. Influent parameters are not defined so there is no indication of what parameters and the required levels are required for the testing process.		Sheryl Ervin, Bio-Microbics, Inc, 10/31/2017	Agree
.1711	147		a. The product renewal criteria places an undue burden on manufacturers to perform certain regulatory tasks which are the under the authority of the Department or county agency to perform. The criteria also place as undue financial burden on manufacturers in a variety of ways. The impact for North Carolina citizens will be more costly systems in order to account for the additional burdens placed on manufacturers. b. The goal of the product renewal sections appear to be a method to de-list components or systems. If the Department feels there is not sufficient ability to do this under the current regulations, then criteria could be developed that specifically address de-listing of components or products rather than having to continually renew approvals on components or products that have long-term track record of compliance. In essence, let's not penalize the good ones.		Colin Bishop, Anua, 10/31/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147		Provisional and Innovative Approval Renewals	No change. We fully support this rule. The Department has historically successfully protected the citizens of North Carolina with a strict initial review of new innovative technologies. Recent legal efforts have prematurely opened the doors to more technologies. While this can be seen as a positive for both industry and citizens alike, liberalization of the approval process can also jeopardize the citizens and our environment to shoddy manufacturers and snake oil salesman. Requiring a Renewal of the permit is a strong yet fairly inexpensive way to ensure new technologies are allowed in our State, while at the same time our environment stays clean and our property owners aren't cheated.	Steve Barry, AQWA, 10/31/2017	Have modified the approval renewal process to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147		Provisional and Innovative Approval Renewals	No change. We fully support this rule. The Department has historically successfully protected the citizens of North Carolina with a strict initial review of new innovative technologies. Recent legal efforts have prematurely opened the doors to more technologies. While this can be seen as a positive for both industry and citizens alike, liberalization of the approval process can also jeopardize the citizens and our environment to shoddy manufacturers and snake oil salesman. Requiring a Renewal of the permit is a strong yet fairly inexpensive way to ensure new technologies are allowed in our State, while at the same time our environment stays clean and our property owners aren't cheated.	Joe Soulia, Orenco Systems, 10/31/2017	Have modified the approval renewal process to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1710	147	1	"all sites"	"all non HSW sites"	Joe Soulia, Orenco Systems, 10/31/2017	Disagree. High strength wastewater systems are addressed separately in the PIA approvals, either as designed by a PE and reviewed by the State on a project specific basis or included as part of the manufacturer's products. The manufacturer always has the ability to identify these sites and disqualify them from the compliance criteria evaluation.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1710	147	1	"all sites"	"all non HSW sites"	Steve Barry, AQWA, 10/31/2017	Disagree. High strength wastewater systems are addressed separately in the PIA approvals, either as designed by a PE and reviewed by the State on a project specific basis or included as part of the manufacturer's products. The manufacturer always has the ability to identify these sites and disqualify them from the compliance criteria evaluation.
.1711	147	18	Instituting a renewal requirement for these approvals is one of those things that looks good in theory but the renewal requirements for Provisional and Innovative Approvals is a new requirement with the burden being placed on system manufacturers and system operators to provide all the information. The data being requested is data that has been previously submitted to the department or LHD by system operators and the department is already aware of any issues with systems installed under the approvals. The renewal process could be an opportunity for the department to have an informal conference with a manufacturer on a regular basis to review and discuss all issues with systems installed under their approval and the manufacturer's course of actions. If the department is not satisfied with the manufacturer's responses then the process for revoking an approval is available.		Bill Fenner, Aquapoint, 10/29/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147	18	1. Instituting renewal requirements on new approval applications is not objectionable. The prospective applicant then makes the go-no go decision to apply for approval in NC fully aware of this renewal requirement. 2. Conversely, imposing renewal requirements retroactively is very objectionable. Those applicants who decided to withstand the cost and rigors of obtaining an approval in NC might have thought twice if "renewal" was in the forecast. In fact, as Trish said during her conference presentation on this topic, for DHHS "not renewing is easier than revoking". 3. In any event, if "renewal for all" is the way it must be, it seems that existing approvals upon which renewal is imposed should have a longer time period than those approvals which were obtained with foreknowledge of a renewal requirement. For example: some period of time (10 years??) from when the approval was issued excluding the period of economic recession (2009-2016) might be palatable. Or some other economic wasteland period surrogate -- years of paltry building permit applications or dhhs travel limitation time periods.		Chip Hassett, The Oak Hill Company, Ltd, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147	18	I do not support any approved system having to renew or reapply for an approval they have already received. The approval process in North Carolina can be time consuming. Manufacturers should not be subject to re-approval every 5 years.		Cory Brantley, 10/2/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147	18	This proposed rule has the potential to add another costly and administratively burdensome requirement for industry. The requirements for re-approval are generally qualitative and highly subject to interpretation, with no clear path toward re-approval or denial. Notwithstanding the above, comments are provided below if the Department opts to keep this proposed rule language.	Strongly propose deleting this section in its entirety.	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1711	147	18	PROVISIONAL AND INNOVATIVE APPROVALS SHOULD NOT EXPIRE WITH A FINITE DATE OF 5 YEARS. MOST SPENT OVER 5 YEARS JUST GETTING APPROVED. AND THE REQUIREMENT WOULD BE COSTLY AND OTHERWISE BURDENSOME. THE STATE MANPOWER CAN BE USED ELSEWHERE. CONTINUE TO REQUIRE O & M DATA SETS AND SUSPEND OR REVOKE BASED ON PERFORMANCE OR NON-COMPLIANCE	ELIMINATE .1711	Doug Lassiter, NCSTA, 10/24/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147	18	As with the comments on riser, effluent filters, and pipe penetration products and the comments for RWTS products, this proposal to set an expiration date and renewal requirement is unnecessary. The approvals of these products, along with the mandatory reporting of the Provisional and Innovative systems should give the Department adequate information and ammunition to correct any inappropriate or non-compliance issue. One question is why there appears to be no approval renewal for accepted products? The benefit to the Department cited in the Fiscal Note for the renewal of approvals for RWTS and P&I systems is $11,700 annually. This proposal must be considered a new fee structure, but it is unknown if the actual benefit after the added drain to existing manpower would be worth the administrative burden to the RWTS and P&I manufacturers.	Eliminate this rule	Doug Lassiter, NCSTA, 9/20/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147	18	Another issue that needs addressing, APPROVALS of manufactured products sold and installed in our state. Over time company's are bought and sold quite often it appears. Some times quality standards get compromised. I think we need have the right to review these products on a regular basis. That's not to say do a complete review, if a product is performing like the manufacture claimed it would when first approved, let them continue. However if industry professionals have some documented complaints, the product needs to be reviewed, contact the manufacturer and give the opportunity to correct the issues. If they cannot correct the issue OR refuses to correct the issue, then address it as need be.		Keith Vernon, Vernon Septic Systems, 10/25/2017	Have modified the approval renewal process to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147	18	Rule .1711	Setting an expiration date on approved products and systems for 5 years. This seems very costly to the manufacturer, which would be passed on to the contractor and then the consumer. Delete these sections of the calendared date of expiration.	NC Home Builders Assn, 10/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147	18	Provisional and innovative approval renewal should not have to be renewed every 5 years. There are rules already in place to revoke the approvals. By having this in the rules would add unnecessary cost to the consumer and is redundant to protecting public health since reporting and sampling has already been submitted on behalf of the owner to the county local health department. The information already giving should have already been reviewed and there is no need to require these companites to give information to the State that's already been given and paid to be given once by the owner/public. It would be nice if each county could up load data received from operators to one state site so all information could be seen by you and the public. It would be very easy to see compliance at that point and not have the public pay for it to be submitted twice with increasing the cost to do business in North Carolina.	Eliminate this rule	Russ Ayers, Bennie Moore Septic Tank, 9/20/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1711	147	19	This is a very subjective and not objective proposed rule. What are the parameters for re-evaluation? It only took 8 ½ years to move from TS2 control demonstration for EZ TREAT and countless dollars due to subjective evaluation by the Department. Personal opinions and biases were the absolute determination of the company's ability to do business in the State of NC. There needs to be an objective and definite process with time constraints in order to even contemplate this procedure. Lack of Enforcement of the current rule has been the norm. Page 147, Line 21 (b) six months prior to the approval expiration, the manufacturer shall submit a written report and re-approval request to the Department… Both (a) and (b) are unnecessary and burdensome. The requirements of ongoing operation and maintenance should provide compliance history found in (b), and the idea of an expiration of an Approval based solely on a definitive date is useless. If the mandatory reports by a certified Operator and the inspection of the LHD are created and compiled as they should with the Department, the expiration deadlines are needless.		Mike Stidham, E-Z Treat, 10/31/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147	21	Other states notify registrants of pending approval expiry (e.g., Alabama, New Mexico, Wisconsin, Washington). North Carolina should provide such notifications.	Add the following subsection: (b) Nine months prior to the approval expiration, the Department shall notify the manufacture of the pending PIA Approval expiration in writing, how to request re-approval, and where to request re-approval. (c) ~~(b)~~ Six months prior to the approval expiration, the manufacturer shall submit a written report and re-approval request 21 to the Department that includes the following:	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Have modified the approval renewal process to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147	24	By default, reporting of malfunction information must be limited to information that has been reported to the manufacturer. The proposed rule essentially requires a manufacturer to report information to which it may not have access or may not be aware. Systems of all types are repaired regularly with no notification made to the manufacturer. The manufacturer is not empowered to make users report malfunction or repair data, so it is limited to recording and reporting only what it receives.	(2) number of malfunctioning systems reported to the manufacturer, including location, reason for malfunction, and how the system was repaired, to the extend this information has been made available to the manufacturer;	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Have modified the approval renewal process to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147	32	G.S. 130A-343(a)(6) references the accreditation of a nationally recognized certification body, and the rule language should carry this term forward from the general statutes, because the Branch need to verify that the body continues to be qualified to issue third-party certifications.	(6) current accreditation status of certification and listing by a nationally recognized certification body; and	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Have modified the approval renewal process to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		ABCD Construction, 9/14/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Andrew Daywalt, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Ben Hildreth, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1711	147 to 148	18-36, and 1-7	Delete		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Brian Beebe, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Cable Septic and Backhoe Service, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Charles Dodge, C&C Septic Services, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Charles Driggers, Driggers Septic Tank, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Charlie Brice, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Chris Hedrick, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Chriscoe Bacchoe Service, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1711	147 to 148	18-36, and 1-7	Delete		Daniel Newsome, D&D Organic Farming, 10/24/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Danny Dennis, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		David Murphy, DRM, 10/24/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Donald Martin, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Garland Walker, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Gerald Leonard, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Hank Hill Grading, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Harry Hatcher, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1711	147 to 148	18-36, and 1-7	Delete		Jeff Link, Rowan, LHD, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Jerry Pearce, 9/15/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Johnny Strickland, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Kearns Pumping Service, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Keith Blackburn, B & C Concrete, 9/20/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Kippy Blanks, 9/28/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Larry Beam, 9/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Lawrence Henning, 9/15/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Lester Breedlove, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Mark Johnson, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Marty Maness, 11/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1711	147 to 148	18-36, and 1-7	Delete		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Michael Barger, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Parrish Homes and Pools,Inc, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Pat Rentz, VIP Inspection Services, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Perry's Grading & Septic Service, 9/14/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Randy Lackey, Love Valley Septic, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Ronnie Burgin, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Russell C. Trodgon, 9/18/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1711	147 to 148	18-36, and 1-7	Delete		Russell Lineberry, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Sterlin Church, Church's Backhoe Service, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Steve Cannon, Rowan LHD, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Terry Maples, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		TM Grading, Inc, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Tyler Jolley, 9/15/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Valentina Oxendine, 10/23/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Vince Scroggins, 9/14/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	147 to 148	18-36, and 1-7	Delete		Willilam Garrison, EcoClean Septic, 9/25/2017	Agree with modifications. The approval renewal process has been modified to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
.1711	148	2	Limiting a provisional approval to reissuance once could place a manufacturer in an impossible position if gaining installations required to meet the terms of the approval is difficult and/or time-consuming. Take the Quick4 Plus Standard LP chamber approval, where the application was submitted in the fourth quarter of 2008, and its still underway 9 years later, with steady progress and effort put forth by the applicant.	Propose deleting as shown below: evaluation protocol to be completed. ~~A Provisional Approval may be re-issued only one time.~~	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Have modified the approval renewal process to mirror that of Washington state, which asks for updated contact information and a notarized signature that the product has not changed over the last year.
.1711	148	14	The rule should be clear that a manufacturer is not required to authorize designers unless specifically required in the PIA approval.	Propose the following modified rule specification: (a) ~~All d~~Designers, installers, and Management Entities shall be authorized in writing by the manufacturer when required ~~and as defined~~ in the PIA approval.	Dave Lentz, Infiltrator Water Technologies, 10/31/2017	Agree
.1712	148	13 to 18	elimate installers from this if installers has approval from NCWCICB		Glenn Hines, 10/29/2017	Disagree. Just because an installer has been approved by NCWCICB means that they are familiar with the installation of a proprietary product. The product manufacturers should have the ability to stay who is or is not approved to work with their product.
.1713	147	34	The LHD should be compiling information for innovative systems as well as provisional. It's the only way to adequately track all the types of systems.	"Notify the Department of all IPs, CAs, and OPs issued for Provisional and Innovative Systems."	Doug Lassiter, NCSTA, 9/20/2017	Agree with modifications
.1713	148	14	THIS ONLY REQUIRES THE LHD TO NOTIFY THE STATE OF PROVISIONAL SYSTEMS. INNOVATIVE SYSTEMS SHOULD ALSO BE TRACKED AND REPORTED	ADD "INNOVATIVE SYSTEMS"	Doug Lassiter, NCSTA, 10/24/2017	Agree
.1713	148	34	Add "and Innovative Systems"		ABCD Construction, 9/14/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Andrew Daywalt, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Ben Hildreth, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Benny Myers, Myers Septic Tanks Co, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Bill Hawes, Massey Septic Tank Company, Inc, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Brian Beebe, 10/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Brian Richardson, Richardson's Thermal Control Ind. Inc., 10/24/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Cable Septic and Backhoe Service, 10/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Charles Dodge, C&C Septic Services, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Charles Dodge, Jr, C&C Septic Services, LLC, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Charles Driggers, Driggers Septic Tank, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Charlie Brice, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Chris Hedrick, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Chriscoe Bacchoe Service, 10/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Clyde Solomon, Solomon's Septic Tank Service, 11/1/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Daniel Newsome, D&D Organic Farming, 10/24/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Danny Dennis, 10/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		David Cooper, Bryant & Lassiter Septic Services, Inc, 9/15/2017	Agree
.1713	148	34	Add "and Innovative Systems"		David Murphy, DRM, 10/24/2017	Agree

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.1713	148	34	Add "and Innovative Systems"		Derrick Driggers, Driggers Septic Tank, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Donald Martin, 10/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Doug Stroupe, Stanley Environmental Solutions, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Frank Pearce, Pearce Backhoe & Septic Tank Services, Inc, 9/15/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Garland Walker, 10/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Gerald Leonard, 10/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Hank Hill Grading, 10/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Harry Hatcher, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Jeff Link, Rowan, LHD, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Jeffrey Wyatt, Blue Ridge Pumping, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Jerry Pearce, 9/15/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Johnny Strickland, 10/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Kearns Pumping Service, 10/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Keith Blackburn, B & C Concrete, 9/20/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Kippy Blanks, 9/28/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Larry Beam, 9/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Lawrence Henning, 9/15/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Lester Breedlove, 10/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Mark Johnson, 10/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Marty Maness, 11/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Max Locklear, Locklear's Backhoe Service, 10/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Michael Barger, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Michael Benfield, Benfield Outdoor Services & Solutions, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Michael Kirk, New Horizon Hardscapes, Inc, 9/25/2017	Agree
.1713	148	34	Amend this to require that LHDs shall notify the Department of all IPs, CAs, and Ops issued for Provisional and Innovative systems. This was probably an oversight, but the information should be gathered and compiled for both.		Mike Stidham, E-Z Treat, 10/31/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Parrish Homes and Pools,Inc, 10/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Pat Rentz, VIP Inspection Services, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Perry's Grading & Septic Service, 9/14/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Randy Lackey, Love Valley Septic, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Robert F. Youngblood, Youngblood Construction, 9/14/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Robert Seawell, Seawell Septic Tank & Concrete Co, 10/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Ronnie Burgin, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Russell C. Trodgon, 9/18/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Russell Lineberry, 10/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Sterlin Church, Church's Backhoe Service, 9/25/2017	Agree

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.1713	148	34	Add "and Innovative Systems"		Steve Cannon, Rowan LHD, 9/25/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Terry Maples, 10/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		TM Grading, Inc, 10/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Tyler Jolley, 9/15/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Valentina Oxendine, 10/23/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Vince Scroggins, 9/14/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Wayne Billingsley, Billingsley Septic Tank Company, 9/22/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Weston Coggins, Pipeworx Plumbing, Inc, 9/14/2017	Agree
.1713	148	34	Add "and Innovative Systems"		Willilam Garrison, EcoClean Septic, 9/25/2017	Agree
Fiscal Note	20		"There have also been some issues with larger concrete tanks that were not designed as traffic rated tanks. They were approved as part of a project specific submittal. These tanks have started to crack just a few years after installation." Did the submittal show traffic rated tanks needed because of traffic but were not used or were the tanks improperly installed in a traffic area? Was the soil evaluated and backfill determined to withstand the constant soil pressure for the large tanks in that “specific” environment? Not enough information to determine if a tank design or manufacturing problem existed or did improper use or installation and inspection problem occur. Equally concerning, "There have also been some issues with “plastic and fiberglass” “approved” units creeping, causing distortion and collapsing leading to multiple performance deficiencies, but interestingly not mentioned.		Latt Moretz, Molds of Bethlehem, Inc, 10/6/2017	The issue with the concrete tanks was brought to the attention of OSWP due to concerns regarding the system. OSWP is aware of issues with plastic products, such as risers and tanks, but has not been able to document the problems. When OSWP has reached out for documentation of issues with plastic products, no documentation has been collected or provided. OSWP cannot take action when there is no documentation to support the proposed action.
Fiscal Note	21		Error in Table 17 Private Sector cost. I do not know about plastic testing cost but the $600.00 for precast concrete might, but doubtful, cover the "test" but not the engineering design and construction for a tank for the "verification test."		Latt Moretz, Molds of Bethlehem, Inc, 10/6/2017	Understood. This information was collected from a concrete tank manufacturer and may not be representative of all concrete tank manufacturers or all steps involved in the process. Based on other comments, the structural vertification test for tanks has been removed from the proposed rules.
Fiscal Note	22		"The criteria for plastic and fiberglass tanks has been in guidance for years.” Concrete spans over 5,000 years, from the Egyptian Pyramids to present day. Romans used a material remarkably close to modern day Portland Cement, invented in 1824. In 1836 concrete strength testing followed by Alvord Lake Bridge, CA in 1889, as the first reinforced concrete bridge--still standing. From World wonders, buildings, streets, military security barriers to septic tanks, concrete has the test of time and adversity, unmatched by any modern-day material.		Latt Moretz, Molds of Bethlehem, Inc, 10/6/2017	Understood that concrete has been around longer. However, just because concrete has been around longer does not mean it is the only material that can be used. Other materials can be used in addition to concrete for tanks. We are trying to treat everyone the same, which is what the industry has been asking of the Branch for years.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
Fiscal Note	22		"The proposed rules include the minimum material requirements and any design requirements that differ from concrete tanks. The most significant design difference between plastic and fiberglass tanks and concrete tanks is the wall thickness. Plastic and fiberglass tanks will have a much thinner wall than concrete. This is a material difference." If testing of the "material" used, but not the actual tank is acceptable, then third party cylinder test breaks for concrete meets the same requirements proposed for approvals as allowed for plastic and fiberglass. Thinner wall material tanks are more subject to deflection and puncture holes and holes in the forming process which can occur. Like concrete, plastic and fiberglass mix designs and wall thickness errors can occur. "Tank structural integrity testing;" Concrete tank material strength, structural integrity and water tightness can be confirmed with the use of a rebound hammer, vacuum testing and water fill-ups, even on site. The vacuum test for tanks in North Carolina is currently five inches of mercury for 5 minutes. Why the proposal to reduce? Reducing vacuum test but proposing increasing psi for concrete is in conflict to one another. Have use results revealed tanks are not subject to the stresses engineering thought or has engineering been using the wrong formulas? If not and standards are reduced, quality is reduced.		Latt Moretz, Molds of Bethlehem, Inc, 10/6/2017	Correct. A concrete tank manufacturer could propose to verify the strength of their concrete tanks with third party cylinder breaks. No concrete tank manufacturer has proposed that option, but we would be open to it as an alternative. We agree that all tanks, no matter what they are made of, are subject to mix design and wall thickness errors. All tank testing requirements have been removed from the proposed rules due to the inability to arrive at a uniform testing standard that would accurately test and address individual tank material issues. We are planning to take a different path to address these issues.
Fiscal Note	22		The Most Important Component to "water tightness" is "structural integrity," even with watertight materials. If units or components not designed to move/deflect, connection such as seams in tanks, risers to tanks, risers stacked and lids to risers are compromised. This causes leaks and in cases lids not capable of proper installation on risers at grade. This can create a deadly condition in backyard playgrounds. Material strength is important but is only a small portion of the structural integrity for "much thinner wall tanks." The proper backfill and compaction of that backfill is their major component to achieve "structural integrity." The draft rules address soils for absorption but overlook another very important critical use as "compacted backfill." Proper sizing, cleanliness and moisture content for compacted soils are required for much thinner wall tanks because they are particularly susceptible to creep, punctures and constant soil pressure suffocation than thicker wall concrete tanks. Backfill quality recording and compaction equipment is available and can be used by contractors and documented at time of installation and given to LHD. I discovered, typically the soil on site is just pushed around much thinner wall tanks like a concrete tank. The most significant "structural integrity" difference for tanks with a "much thinner wall than concrete," even under current rules is to have stricter installation overview.		Latt Moretz, Molds of Bethlehem, Inc, 10/6/2017	The tank material backfill for plastic and fiberglass tanks is a manufacturer specific issue. The manufacturer should be working with their certified installers and with the LHD to verify that the tank installation meets all the requirements. We are certainly willing to help LHDs with this issue, if requested.

Rule Number	Page Number	Line Number	Comment	Suggestion	Comment from	OSWP Response
Fiscal Note	22		It is understood that the tank walls and floor see nearly balanced loading when the tank is filled with water during normal service. It is also understood that a tank may be filled with water during backfilling at the time of installation, thus eliminating any condition where the tank must fully support the soil loads and uplifting pressure if present. However, although this condition is avoided both during installation and during normal operation, it does in fact occur in pump tanks and during pumping of a septic tank, an operation which is strongly recommended and therefore occurring more often. Due to this, especially using compacted backfill soil as a tank's primary structural integrity, what percent of optimum density (compaction) must the backfill achieve? Is the specified percentage in accordance with standard proctor or modified proctor testing methods? What process is used to determine optimum moisture content for compaction? If granular materials are allowed for backfill (stone or sand), how is the backfill prevented from relaxing and migrating, suffocating the tank during a pumping operation? What inspection procedures are required immediately after pumping to ensure the tank has not been compromised?		Latt Moretz, Molds of Bethlehem, Inc, 10/6/2017	The tank material backfill for plastic and fiberglass tanks is a manufacturer specific issue. The manufacturer should be working with their certified installers and with the LHD to verify that the tank installation meets all the requirements. We are certainly willing to help LHDs with this issue, if requested.
Fiscal Note	22		How is long term creep monitored, as plastics are particularly susceptible to creep? FYI - here is a good article https://www.eiseverywhere.com/ ehome/174282 How is long-term performance monitored, as plastics at or above grade are particularly susceptible to fracturing from contact damage, seasonal temperature changes and are more susceptible than concrete to decapitation from weed eaters, lawn mowers and aerators.		Latt Moretz, Molds of Bethlehem, Inc, 10/6/2017	We were not able to access this article. We do agree there are issues with risers located above grade.
Fiscal Note	22		"The proposed rules also include a provision for all the effluent filter, riser, and pipe penetration approvals to become renewable every five years." This requirement should only occur if the manufacturer makes changes, performance standards change or trouble with installation or performance occurs.		Latt Moretz, Molds of Bethleham, 10/6/2017	We understand your comment, but disagree. We have streamlined the renewal process so that it is not a product re-approval process.

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Fiscal Note	38		"The LHDs have many priorities that they must attend to on a daily basis." The "Private Sector" also has many priorities that they must attend to on a daily basis as well. Unlike public servants, number one priority for the private sector to stay employed, you must turn a profit. The increase cost of doing that has some good Industry Businesses considering going out of business. Smaller companies are typically at a great disadvantage over large companies who can absorb expensive cost change. Adding to LHDs "many priorities" is not a comfort that proper enforcement, documentation and record keeping associated with the proposed draft rules will happen. If draft rules are made permanent, what provisions can the industry expect to see at the State and LHDs level to implement and maintain such an enormous task?		Latt Moretz, Molds of Bethleham, 10/6/2017	The State and LHDs will do their best to implement the rules. The State has also revised the rules based on the comments received to try and reduce this burden.
Fiscal Note	38		"The cost of materials (plastic, concrete, steel, etc.) will impact the projected costs to tanks and appurtenances (effluent filters, risers, and pipe penetrations). If the cost of the materials increases, that could drive the cost of these products up, ultimately costing the homeowner more for the on-site wastewater treatment system." The cost of material is only a small fraction of the increase cost. Labor cost for engineering, equipment, construction, testing, recording, reporting, submittals, renewal approvals and record keeping proposed in the rule changes was not included in the fiscal note provided. The amount of time to respond in relation to the amount of time to get to this point is extremely unfair to the Industry and LHDs--specifically for those whose job involves the actual physical manufacturing and installation of products during the day and then often must do their office work at night. Unlike writing rules, which in time will pass, this is our daily battle. Therefore most of my comments and questions at this time are more in principle. I hope to be more specific to page and number if time allows.		Latt Moretz, Molds of Bethleham, 10/6/2017	We understand the principle of the comments and will await to see if any further comments are provided.
Fiscal Note	38		We could gold plate tanks in NC. This will change their appearance which may or may not be an improvement depending on personal opinion or if you are the one paying for the gold. The appearance will change but their performance stays the same. Changing the rules while not enforcing product use according to their approval will improve North Carolina's appearance but not performance. Without serious ground leveling changes, this draft, as written will reduce the performance of system quality and create inequality for products. The solution for improvements, if you did not pick up on, can be addressed and are applicable in current rules. The major problem with current rules is not lack of content but structuring between product, installation and service that hinders follow through. A very disturbing General Statutes example is "access devices," riser for septic tanks; G.S. 130A-335(b) "The access device shall :(f) (4) Come to within six inches of the finished grade. (5) Be visibility marked so that the access device can be readily located." Access devices, risers for septic tanks should not and never were intended to be exposed for obvious safety and product protection reasons. If this is happening, regardless of personal interpretations or local rules, to do so is breaking State Law. When the consumer is educated about this illegally-installed yard hazard, who will share in the responsibility for correction?		Latt Moretz, Molds of Bethleham, 10/6/2017	That is a good question and would be answered on a case by case basis. There are valid reasons as to why septic tank risers are brought to grade and the site would need to be evaluated to see if it falls into one of these sites.

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			I hear a lot of chatter about performance, from products to personnel. How many “issues,” repairs are handled without permits and reporting obvious concerns? How many Pumpers, after servicing report this issue? They have extreme difficulty or can’t get the riser lid properly installed because of creeping. I talked with two pumpers this week. I always ask for the reporting documentation and pictures--my point, none. I insist they start following through. They may need them to cover their actions. Why do people in our industry resist doing their reasonable service that protects others, the environment, and themselves? Taking photos and sending them for reporting/research information or possible investigation is not that tasking. Our industry has an advantage over most long life performance products. From design to service, we have the network to see if what we are doing is going in the right direction. We aren’t using it. I am trying to make contacts and get pictures and documentation for up-to-date systems and component “issues.” I emphasize “up to date,” for example; concrete tank quality today is much improved over those made twenty years ago.			We agree with the request for documentation for problems. If there is a problem but we are not notified or provided with documentation, there is not much we can do.
			Like “some issues with larger concrete tanks that were not designed as traffic rated tanks,” other products have started to have “some issues” even though the criteria for plastic and fiberglass “has been in guidance for years.” If there are no material or design issues, this narrows the possible sources for issues to installation and inspection not following “guidance” requirements. Unfortunately, because of very little follow-through; no official documented causes have surfaced yet. I do know the attached pictures are from different NC counties.Each site can vary, and for materials and designs that require certain specifications, there must be stricter installation overview, documentation and continued monitoring to ensure the intended performance is being met. These are real considerations that are not optional or loosely applicable to maintain the system quality and safety.			We agree with the request for documentation for problems. If there is a problem but we are not notified or provided with documentation, there is not much we can do.