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ENVIRONMENTAL PROTECTION Updated: April 5, 2012

WATER RESOURCE MANAGEMENT

Standards for Individual Subsurface Sewage Disposal Systems

Readoption with Amendments: N.J.A.C. 7:9A

Proposed: March 7, 2011 at 43 N.J.R. 478(a)

Adopted: March 6, 2012, 2012 by Bob Martin, Commissioner, New Jersey Department of Environmental Protection

Filed: March 7, 2012 as R. 2012 d. 066, **with substantial and technical changes** not requiring additional public notice and comment (see N.J.A.C. 1:30-6.3).

Authority: N.J.S.A. 13:1D-1 et seq.; 26:3A2-21 et seq., 58:10A-1 et seq., including 58:10A-16; and 58:11-23 et seq.,

DEP Docket Number: 02-11-01

Effective Date: March 7, 2012, Readoption;
April 2, 2012, Amendments

Expiration Date: March 7, 2019

The New Jersey Department of Environmental Protection (Department or NJDEP) is readopting the Standards for Individual Subsurface Sewage Disposal Systems (Standards), N.J.A.C. 7:9A, with amendments. The Standards govern the design, location, construction, installation, alteration, operation and repair of individual subsurface sewage disposal systems, commonly known as “septic systems.” The Department has reviewed the Standards and determined that updating these rules is necessary to be consistent with advancements in

individual subsurface sewage disposal design and technology in order to protect human health and the environment.

This adoption document can be viewed or downloaded from the Department's website at http://www.nj.gov/dep/rules/adoptions.html.

Summary of Public Comments and Agency Responses:

The Department received comments on the proposed readoption with amendments, published at 43 N.J.R. 478(a), from March 7, 2011 to May 6, 2011. Twenty-eight commenters submitted comments. The number(s) in parentheses after each comment corresponds to the number identifying the commenters below:

1. Annibal, Garry	Township of Harding Department of Health
2. Barkley, Gregg	Van Cleef Engineering Associates
3. Bishop, Colin	Bord na Móna Environmental Products U.S. Inc.
4. Blodig, Allison	Bio-Microbics, Inc.
5. Cahill, Thomas	New Jersey Septic Management Group
6. Carpenter, Andrew	Private Citizen
7. Dillon, Patrick	Atlantic County Department of Human Services
8. Ferriero, Paul	Ferriero Engineering, Inc.
9. George-Cheniara, Elizabeth	New Jersey Builders Association
10. Gogats, Robert	Burlington County Health Department
11. Greber, Patrick	Mershon Concrete
12. Hansen, John	Readington Township
13. Kotdawala, Shrinath	Kashi Consulting Company, Inc.
14. Lentz, David	Infiltrator Systems, Inc.
15. Mersky, Sandford	South Jersey Engineers LLC
16. Minch, Joel	Christopher P. Statile, P.A.
17. Moore, Leonard	Planet Care, Inc.
18. Mroz, Marilyn	Cushetunk Technical Services, Inc.
19. Osias, Gene	Township of West Milford Department of Health
20. Palatini, Jeff	Freehold Area Health Department
21. Riether, Mark	South Jersey Water Test, LLC
22. Severs, William	William D. Severs, Co.
23. Simonetta, Joseph	New Jersey Society of Professional Engineers
24. Terry, Theo	Bear Onsite, LLC
25. Wengrowski, E.	Private Citizen

26. Wengrowski, Ed	Pinelands Commission
27. Wunner, Nicholas	Wunner Engineering Associates, PA
28. Yannacone, Gregory	Yannacone, Villa & Aldrich, LLC

General comments

1. COMMENT: The NJDEP took ten (10) years to publish this rule proposal. NJDEP then decided to give the public only 60 days (44 work days) to provide comments and feedback. The NJDEP should have provided more time for submission of comments. (7)

RESPONSE: The Administrative Procedure Act (APA), N.J.S.A. 52:14B-1, et seq., establishes a minimum 30 day comment period on rulemaking with the minimum comment period increased to 60 days when the agency does not publish a quarterly rulemaking calendar. The Department, as a matter of practice, does not publish a quarterly rulemaking calendar, but provides a 60-day comment period on all proposed rules. The Department will, when appropriate, extend the comment period of a rulemaking when it determines there is sufficient public interest in such an extension (see N.J.A.C. 7:1D-5.1). Among factors considered in determining whether sufficient public interest exists to extend the comment period is whether extension of the comment period is likely to result in the Department receiving comments relevant to the proposed rule that raise issues or provide new information, data or findings that were not previously raised or provided in development of the proposed rule or during the initial public comment period. In this case, the development of the rule proposal included Department discussion of the proposed rule amendments with health departments throughout the State over a period of several years through regional meetings and e-mail communications. Also, as described in the rule proposal at 43 N.J.R. 479, there is a statutorily required advisory committee that meets regularly to discuss the

rule. Members of the statutory advisory committee are required by Statute to come from specific professional organizations to ensure that a broad range of interests are represented by individuals with specific skills. There are several members of the statutory advisory committee that represent health department professionals and local government agencies, which have all reviewed and provided input and advice on the amendments that were proposed. The commenter submitted written comments during the public comment period that outlined its concerns, which are summarized and responded to in this document. In light of this history and after review of the commenter's written comments, the Department determined that extension of the public comment period past 60 days would not be likely to result in receipt of additional comments relevant to the proposed rule, raise issues or provided information or findings that were not previously raised or provided during the development of the rule amendments and during the comment period provided for submission of written comments.

2. COMMENT: The rules should not be adopted in their current form. Significant modification and a new comment period should be provided. Outreach to administrative authorities has not been adequate. Most are not aware of the proposed changes and none have an appreciation for the extent of the proposed changes. (8, 9, 28) One commenter indicated that it did not receive the final draft rule proposal for review prior to its being submitted to the Office of Administrative Law for publication in the *New Jersey Register*. (9) One commenter believes the Department should consider tabling the adoption of the proposed rules in order to provide additional time to refine the proposed standards and a new comment period should be granted. (28)

RESPONSE: The Department adhered to the requirements of the Administrative Procedure Act. The Department provided additional notice of the proposal in four newspapers with general circulation throughout the State. Additionally, notice of the proposal was provided via email to every health department on record that deals with the onsite wastewater disposal system regulations and to all individuals registered with the Department on its voluntary registry of professionals in the onsite industry to keep those professionals apprised of developments in New Jersey's onsite wastewater management program. In addition to providing the above forms of notice of the proposal, the Department presented an overview of the proposed rule changes at the New Jersey Environmental Health Association meeting in Atlantic City, New Jersey on March 8, 2011, the day after the publication of the rule proposal in the New Jersey Register. These notices, combined with outreach the Department has engaged in with health departments over the past 12 years regarding potential changes to the rules, including those that were part of this proposal, reflect the Department's interest in assuring that notice and opportunity for input was provided to the maximum extent possible. The Department believes the notice provided was appropriate to allow those interested an opportunity to review and comment on the changes being adopted at this time.

3. COMMENT: The commenter supports the proposed amendments to the Standards. However, the adopted Water Quality Management Planning rules make these changes moot. The relationship between the two rules should have been coordinated to allow for the progressive developments proposed here. Specifically, recognition of advanced nitrate removal technologies

and their relationship to nitrate dilution models should be addressed. The Department also has not provided clear evidence that existing systems designed under current standards are causing such harmful degradation. (9)

RESPONSE: The amendments to these rules now facilitate the use of nitrogen removing technologies as part of onsite systems, which previously would have required additional permitting by the State. The amendments specifically recognize the use of nitrogen treatment technologies through the incorporation of NSF Internationals Standard 245 certification, which acknowledges a technology's demonstrated ability to reduce nitrogen levels by fifty percent or more. The Department disagrees that these rules are the appropriate rules to establish how to achieve compliance with other rules, such as the Water Quality Management Planning (WQMP) rules. These rules establish the standards for the design, construction, installation, use, operation and maintenance of individual subsurface sewage disposal systems. Any changes to the WQMP rules implementation as a result of the use of nitrogen reducing technologies will be incorporated or otherwise addressed through those rules.

4. COMMENT: The commenter questions the validity of the Department's required use of the Recharge Based Nitrate Dilution Model. The threshold of wastewater design flow exceeding 2,000 gallons per day is extremely low, which indicates that many development projects would be required to comply with the nitrate planning standard of two mg/l. (9)

RESPONSE: These rules only require the use of a nitrate based dilution model for certifications of subdivisions of 50 or more realty improvements. For a typical residential development, this results in a minimum design volume of 17,500 gallons per day but is typically much larger. Use of such a dilution model in these regional type applications is appropriate. The Department has other rules which require consideration of nitrate dilution, however comments regarding those programs are beyond the scope of this rule making.

5. COMMENT: The rules are well intended and offer many new options that will reduce compliance costs and enhance the environment at the same time. (15)

RESPONSE: The Department acknowledges the comment in support of the rules.

6. COMMENT: The Department and its dedicated staff are commended for developing and advancing this excellent set of rules and amendments. These rules are vital to the protection of our residents public health and of the State’s natural resources. (26)

RESPONSE: The Department acknowledges the comment in support of the readoption with amendments to these rules.

7. COMMENT: The Department is applauded for agreeing to refer misconduct to the Board of Licensed Professional Engineers and Land Surveyors, where it rightly belongs. (23)

RESPONSE: The Department acknowledges the comment in support of the action described in the Summary.

N.J.A.C. 7:9A-2.1, "septic system inspector" definition

8. COMMENT: In the Summary of the new definition for "septic system inspector" at 43 N.J.R. 484, it is written "The Department is also considering requiring those who wish to be included on the list to obtain certain, minimum credentials such as those available from organizations including NSF International, the National Association of Wastewater Transporters and the Pennsylvania/New Jersey Septage Management Association." The commenter hopes that any individual that already possesses official credentials from New Jersey, such as a Professional Engineer or Registered Environmental Health Specialist would be exempt from such requirements. (5)

RESPONSE: As referenced in the Summary, the Department is in the process of developing a voluntary program to acknowledge septic system inspectors that have certified a commitment to the use of the inspection protocol in the rule when performing system inspections as part of real property transfers. As part of the process, the Department intends to consult with professionals in the industry to develop the program. However, simply bearing the license of a Registered Environmental Health Specialist or Professional Engineer does not qualify one as a septic system inspector. There are many individuals in these professional titles that have not examined an onsite system or evaluated its performance. The Department will explore the possibility of

including a work experience waiver or reduced requirements for those individuals bearing these professional licenses.

9. COMMENT: To better protect public health and the environment, the Department should consider amending the rule proposal so as to establish minimum qualifications for individuals engaged in inspecting septic systems for both realty transfers and locally required septic system management programs. In the rule Summary at 43 N.J.R. 479, the Department incorrectly reports that that there are "no statutory licensing requirements for individuals performing septic system inspections in New Jersey". To be clear, N.J.S.A. 58:11-26, 26:1A-15, 26:3A2-1 et seq. and 45:8-1 et seq. provide such statutory licensing authority. Through the current proposed readoption with amendments effort, the Department has the opportunity to ensure that only qualified individuals engage in septic system inspection activities by mandating within N.J.A.C 7:9A that only holders of New Jersey Health Officer Licenses, New Jersey Registered Environmental Health Specialist Licenses and New Jersey Professional Engineer Licenses inspect and certify compliance of individual subsurface sewage disposal systems in reports submitted to administrative authorities for inspections associated with realty transfers and local septic system management programs. The Department need look no farther than existing N.J.A.C 7:9A-3.13(a) for language which implements the underlying statutes and which ensures that the inspection and certification of individual subsurface sewage disposal systems be performed only by holders of these licenses as a means to ensure professionalism in the performance of such inspections. (25)

RESPONSE: Many states have a program to license or otherwise certify septic system inspectors. However, the proposed rulemaking did not include that type of program. While the Department may have the legal authority to establish such regulatory requirements, the Department believes it most appropriate to have specific legislation authorizing the institution of such a program to strengthen the Department's ability to administer such a program. The New Jersey legislature has proposed a bill, currently S574, under review by the Department which could establish such a program. Such legislation could be similar to other Department licensing programs, such as those regulating individuals in the Licensed Site Remediation Professional (N.J.S.A. 58:10C-1 et seq.) or the Underground Storage Tank (N.J.S.A. 58:10A-24.1 et seq.) programs, which include specific statutory authority allowing the Department to license, oversee and enforce the provisions of those licenses. Resources would need to be dedicated to the development and oversight of such a program, if one were established.

N.J.A.C. 7:9A-1.2 Scope

10. COMMENT: The proposal description states that the regulations are the minimum standards for the design and installation of individual subsurface sewage disposal systems (ISSDS). A significant number of municipalities have adopted special ordinances with stricter requirements. The commenters inquire if those local ordinances need to be re-introduced, adopted and filed with the Department or if the ordinances need to be reviewed for consistency with the new rules and then modified as necessary to be consistent with the new rules. If so, this effort will be significant on the behalf of the administrative authority and the municipalities and is a cost that

does not appear to have been considered in the Department's evaluation of the impact on local agencies. (8, 12)

RESPONSE: Pursuant to N.J.A.C. 7:9A-3.1(b), administrative authorities that adopt special ordinances containing requirements that differ from the rules are required to file a copy of the ordinance with the Department within 10 days of adoption. The Department has not received, pursuant to that rule, copies of any such local ordinance that would require a municipality to revise, reintroduce or otherwise modify an existing adopted ordinance. The Department does recommend that every municipality regularly review its ordinances to make sure those regulatory controls are still appropriate. There are many local ordinances that exist that are outdated and should be considered for revision, but still meet the minimum requirements of the current rules. For example, ordinances that restrict the type of materials that system components may incorporate should be examined to include newer materials that are approvable under the chapter to provide constituents with the opportunity to take advantage of newer technologies. Additionally, many ordinances include fees which should be adjusted to account for the rate of inflation and to ensure the authority is recovering the actual costs of administering the program, including the requirements of these amendments.

11. COMMENT: The rules indicate that they are the "minimum standards" and that administrative authorities can increase these standards at their option. Most authorities that have adopted this approach in the past have done so with little or no scientific rationale – in many

cases doing so in a manner to prevent growth and accomplish nothing else. These rules should be the rules Statewide and standards should be uniform throughout. (15)

RESPONSE: The Individual Subsurface Sewage Disposal System rules apply Statewide and provide the standards determined by the Department to be protective of human health and the environment. The authority of local authorities to pass ordinances prescribing higher standards than those contained in this chapter is statutorily created (see N.J.S.A. 58:11-25). The rules reflect this statutory scheme.

N.J.A.C. 7:9A-1.6 General prohibitions

12. COMMENT: Does N.J.A.C. 7:9A-1.6(g) mean that an engineer cannot design a septic tank to be installed in front of an existing pit that is used for the kitchen and laundry? Does the engineer have to show the existing pit being completely removed before designing any alteration? (19)

RESPONSE: If the existing "pit" is a cesspool as defined by the rules and the property owner desires to convert that previously existing cesspool to be part of a greywater system to serve a structure, use of the existing cesspool would not be allowed. Standards for greywater seepage pit systems at N.J.A.C.7:9A-11 are not similar to those that were applicable to cesspools prior to July 1, 1978 (when cesspool construction was banned). Accordingly, continued use of the cesspool as the equivalent of a greywater seepage pit is not appropriate. It may be possible to

remove the cesspool and sufficiently excavate the area to allow for installation of a seepage pit conforming with the current rules to be installed in that same area, but use of the prior cesspool would not be allowed.

13. COMMENT: The language prohibiting the alteration of a cesspool at N.J.A.C. 7:9A-1.6(g) is confusing. The introductory portion of the proposal says these are prohibited. The rules also say, however, that the replacement of a cesspool with a new disposal system is required. Based on the definitions in the rules, this replacement constitutes an alteration. The proposed rules are clear that a cesspool cannot be replaced with a cesspool. However, alterations to cesspools are not prohibited; they are mandatory. (8)

RESPONSE: The term “alteration” applies only to an “individual subsurface sewage disposal system” or “system”, which specifically excludes cesspools. The rule allows only those cesspools that are currently functioning as they were originally designed; are not being sold; and are not in any need of repair or other correction to remain in place. The previous rule allowed for the alteration of an existing cesspool to provide a septic tank in front of the cesspool, effectively converting the cesspool to a seepage pit system. This is no longer allowed because cesspools constructed under the rules prior to July 1, 1978 do not protect public health and the environment to the extent required by the current standards. Cesspools that exist at the time this rule is adopted that are either in need of repair or alteration, or are part of a real estate transfer must be abandoned and replaced by a system in conformance with the new requirements. Therefore, the Department does not consider this an “alteration” under the definition of the term

in the rule. A new system, with certain allowances for site constraints due to existing structures that must still be provided with sewerage facilities, is now required. If a conforming system can be designed for the site, then that would be appropriate. If the site cannot support a fully conforming system, then allowances, as provided at N.J.A.C. 7:9A-3.3(e), would be acceptable.

14. COMMENT: The proposed rule at N.J.A.C. 7:9A-1.6(g) prohibiting the repair of a cesspool may create an undo financial hardship for a homeowner. If a person is replacing the lid of a cesspool for the sole purpose of safety, this rule change would require installation of a new system even though the cesspool was not malfunctioning. Where a new lid might cost several hundred dollars, a new system would be several thousand dollars or more. This is unfair and will result in people not protecting the safety of others simply because they don't want to install, because of cost, a new system when the current cesspool is working with some unsafe alternative to a replacement lid, such as use of an existing wooden top. While the commenter wholly agrees with complete replacement of a cesspool on failure of the cesspool or at the time property changes hands, the rules should not prohibit work that is done solely to correct an unsafe condition. This should not be considered a malfunction. (11)

RESPONSE: As indicated in the proposal at 43 N.J.R. 481 and 491 cesspools do not provide treatment of wastewater prior to discharge, but instead essentially result in the discharge of sewage directly to the environment, creating the potential for significant drinking water and public health impacts. Because of the serious public health concerns created by cesspools, it is the Department's intention that their continued use be strictly limited and that all cesspools be

eventually eliminated. In order to accomplish the eventual elimination of all cesspools, the Department believes that, as the components of cesspools begin to deteriorate, it is appropriate to require that the cesspool be retired and replaced with a system compliant with the current standards designed to protect human health and the environment. If the Department were to allow replacement of components of the system due to the cracking or other deterioration of that component, cesspools could theoretically be maintained indefinitely through piece by piece replacement. The Department agrees that unsafe conditions should not be allowed to continue to exist and trusts that owners of cesspools will eliminate such unsafe conditions and the potential liability they create by taking appropriate action to retire and/or remove the cesspool as it deteriorates and replace it with a conforming system. It is also pertinent to note that the rules since 1990 have required that any "correction" to a cesspool include the addition of a septic tank in front of the cesspool, effectively altering the cesspool to a seepage pit system. This requirement extended to corrections such as lid replacement. Failure to comply with this requirement would be considered a violation by the Department.

15. COMMENT: The commenter understands the prohibiting of privies, outhouses, etc. However, the Department should continue to allow the placement of a septic tank prior to a cesspool, especially on the smaller lots where the construction of a septic system in conformance with this code might be prohibited. (27)

RESPONSE: Through the adopted amendments, the Department is requiring the upgrade of systems that have been banned for new installations in New Jersey since January 23, 1978.

These antiquated units provide no pretreatment of wastewater before discharge, allowing raw sewage to directly impact the environment. Placement of a septic tank prior to discharge of wastewater to the cesspool does not significantly reduce the impacts associated with cesspools and does not create a system conforming with current standards. It is no longer reasonable, in a state as densely populated as New Jersey that has extensive natural resources that need to be protected from such discharges, to allow these obsolete units to continue to be utilized.

However, as described at 43 N.J.R. 491, rather than impose an immediate ban on cesspools and require all such units to be abandoned and replaced on the date of adoption of these amendments, which could create a significant immediate financial burden on those currently relying on cesspools, the Department is allowing replacement of cesspools to be delayed in certain circumstances. Particulary, the rules allow existing cesspools that are currently functioning as they were originally designed to remain in place for use by the existing owner. However, if the property served by the cesspool is sold or if the cesspool is in need of repair or other correction, it must be replaced. The Department believes that it is appropriate to require elimination of the cesspool and upgrade to a conforming system at the time of property transfer due to the availability of funds during those transfer events and when these units require corrections due to problems with those units.

With reference to smaller lots, the rules provide for a number of design considerations to deal with these situations. For example, the use of an advanced wastewater pretreatment device pursuant to N.J.A.C. 7:9A-8.3 provides opportunity to reduce the disposal field size in both the area required and the thickness in the zone of treatment. If a fully conforming design is not possible, N.J.A.C. 7:9A-3.16(a)1 provides the administrative authority with the ability to approve of nonconforming designs that are protective of human health and the environment.

16. COMMENT: The proposed rule expands the list of “sanitary sewage disposal methods” that are prohibited by N.J.A.C 7:9A-1.6(g) and the current rule defines "systems" as not including antiquated units such as privies, latrines, pit toilets and outhouses, which are known to exist. Further, the proposed rule generally prohibits the continued use of such units following a real estate transaction. However, the rules do not prohibit the continued use of all existing privies, latrines, pit toilets and outhouses on publicly owned lands because units on publicly owned lands would not be subject to inspections. Therefore, their use and resultant pollution will go unabated absent a rule requiring their elimination. The Department should not permit the continued use of these antiquated and polluting units on publically owned lands. (25)

RESPONSE: The exemptions at N.J.A.C.7:9A-3.16(c) apply only to cesspools that are not malfunctioning and do not apply to the other units listed, such as privies, outhouses, latrines, pit toilets or similar units as described by the commenter. The rules indirectly affect the upgrading of cesspools located on publicly owned lands. While it is true that inspections of the onsite sewerage disposal systems are not typically required at the time of the transfer of property for these lands, upgrading of those facilities would be required in the event of malfunction or any other correction conducted on that cesspool, but not including routine maintenance activities, such as pumping out the unit. Further, many of these facilities are regulated under New Jersey Pollutant Discharge Elimination System permits, which require the immediate upgrading of large capacity cesspools with systems pursuant to N.J.A.C. 7:14A-8.4(a)3i. As indicated in Response to Comment 113, the Department is not removing the provision at N.J.A.C.7:9A-3.16(c)2 that

exempts publicly owned land from upgrading at the time of real property transfer as this would be a substantiatial change upon adoption that would require separate rulemaking. However, the Department plans to discuss this, and the potential for additional rulemaking on this issue, with the statutory Advisory Committee at a meeting prior to the end of 2012.

17. COMMENT: The recording requirements for the deed associated with the system should be modified. N.J.A.C. 7:9A-1.6(k)2 requires the filing of a map that shows the components and setback distances. Given the size of documents generally recorded, it is not clear that a site plan that is recorded will be of a size that is legible. Alternatively, the document should be referenced by preparer, date, etc. and identified as being on file with the administrative authority. (8, 12, 28)

RESPONSE: The Department agrees that it is appropriate to modify N.J.A.C. 7:9A-1.6(k) to allow the option of including in the deed notice a reference to the availability of plans kept permanently by the administrative authority containing the required information, since those records are already required to be maintained in accordance with the rule for the life of the system at N.J.A.C. 7:9A-3.15(b). This option is being added as part of this adoption.

18. COMMENT: A site plan, like that required by N.J.A.C. 7:9A-1.6(k)3, that shows distances to property lines can only be prepared by a professional land surveyor. (27)

RESPONSE: Pursuant to N.J.A.C. 13:40-7, the rules regarding the use of an existing survey prepared by a licensed surveyor are under the purview of the New Jersey Board of Professional Engineers and Land Surveyors. Licensed professional engineers and land surveyors are both bound by the laws and rules under which they practice their profession and the Department would refer that specific requirement to the Board if there is a question of applicability.

19. COMMENT: The Department should clarify how N.J.A.C. 7:9A-1.6(l) would be applicable for proposed developments that, after completion, will ultimately exceed a design volume of 2,000 gallons per day (gpd), taking into account the entire plan of development or common plan of sale in the appropriate provisions of the proposed changes to this chapter. These requirements should be emphasized, especially due to the inconsistencies between these standards and the New Jersey Pollutant Discharge Elimination System (NJPDES) rules, N.J.A.C. 7:14A. (9)

RESPONSE: On June 5, 2009, the Department adopted amendments to both these rules and the NJPDES rules to make both rules consistent with each other by specifically adopting identical definitions for "property" and "common plan of development or sale" in both rules. Since that date there has been no inconsistency. Any project where there is a common plan of development or sale on a property that at any point in its development exceeds 2,000 gpd in design volume will not be approvable under this chapter and must seek approval under the NJPDES rules, N.J.A.C. 7:14A.

20. COMMENT: N.J.A.C. 7:9A-1.6(l) implies that, with the exception of certain residential projects, all others (even existing) where total flows exceed 2,000 gpd would be subject to NJPDES standards; but this is unclear and potentially devastating to the economy. For example, if a single property owner has multiple lots within an industrial complex that were legally created and approved in the past, they are now subject to WQMP and NJDPES approvals. Does the same apply to existing businesses and facilities that share a common infrastructure but separate ownership? (15)

RESPONSE: The requirement for nonresidential developments to obtain NJPDES permit approval, regardless of whether that property has been seperated into multiple lots and blocks, has been in place since January 1, 1990. Except for developments involving single family homes served by individual systems located on the same lot as the home, all developments are subject to this analysis. Common ownership is one test to determine if there is a common pecuniary or other shared interest in the project. It may be the case that if each separate lot within a project is truly separate from all of the others in terms of development, utilities and amenities, there may be a reasonable determination that those projects are truly separate properties. However, common entrances, shared driveways, stormwater controls involving the entire development and property management associations are just a few of the examples of shared and common interests that should deem the entirety of development a single "property".

Single family residences served by individual subsurface sewage disposal systems are the only type of system that is exempted from NJPDES rules. All other existing discharges are subject to regulation under the NJPDES rules. Those rules provide for a permit-by-rule at

N.J.A.C. 7:14A-8.5(b)1 if the system complies with the requirements of this chapter. However, where an existing or proposed discharge on a property exceeds the limitations of N.J.A.C. 7:9A-1.8, typically in terms of flows greater than 2,000 gpd, a permit-by-rule is not applicable. In that case, failure to obtain the appropriate NJPDES permit prior to discharge would be a violation of the NJPDES rules.

21. COMMENT: Clarification is needed on residential development. The way N.J.A.C. 7:9A-1.6(l) is written, is it true that residential development can be serviced by individual subsurface disposal systems and that there is no prohibition on the number of lots? (27)

RESPONSE: There is no prohibition in this chapter on the number of lots allowed for residential developments consisting of single family homes served by individual systems located on the same lot as those single family homes. It is noted that for residential subdivisions involving 50 or more realty improvements, municipalities considering those subdivision applications are compelled by the Realty Improvement Sewerage and Facilities Act (RISF) at N.J.S.A. 58:11-25.1 to require proof that the Department has certified that the proposed water supply and sewerage facilities to serve those realty improvements comply with applicable State standards prior to granting subdivision approval. Certifications under this chapter are issued for these developments in accordance with N.J.A.C. 7:9A-3.18.

22. COMMENT: N.J.A.C. 7:9A-1.6(m) is overly broad, too restrictive and is a burden on the administrative authority. The design of the system (and its on and off site impacts) are the

responsibility of the system designer and the property owner. The proposed language implies that if someone allegedly suffers damage as the result of a septic system, they can accuse the administrative authority of violating N.J.A.C. 7:9A. In addition to the potential for a DEP enforcement action, it seems to create an opportunity for a tort claim based on an alleged violation of the DEP rule. The administrative authority must look at the potential impacts of the proposed system and its compliance with the design standards. However, raising the administrative authority's level of responsibility to be on par with the designer (even though administrative authorities are not licensed to design) is not reasonable. This rule places undue liability on the administrative authority when it should be placed on engineer, installer and property owner. (7, 8, 10, 12, 19)

RESPONSE: Ultimately, it is the responsibility of property owners to comply with the provisions of the various regulatory requirements. Further, the Department does not expect administrative authorities to police each individual application for compliance with every regulatory requirement, including those the administrative authority may not be responsible for, unless information regarding that requirement is brought to the administrative authority's attention or otherwise discovered by the administrative authority. Due to the complex nature of this prohibition, including issues related to injuries to persons or property, the Department is not adopting this provision or a modified version of the prohibition at this time. While the Department is not adopting the provision as it does extend further than the Department intended, the Department still anticipates that administrative authorities and the authorized agents will consider the adverse impact actions such as allowing construction to occur prior to properly

establishing appropriate setback distances may have on neighboring properties and the system, and should only approve designs that do not cause harm to the neighbor's property and system.

23. COMMENT: Applications where an injustice is corrected because of the construction, alteration, or repair should be allowed even if it will cause injury to another person. That is to say, if a mounded system stops a neighbor's runoff from coming on to the subject property, the system should be allowed because it is only stopping a previously (most likely) ungranted occurrence. Noted that is not to say that the runoff from subject property should be allowed onto the neighbor's property, only that the neighbor's runoff should not impede the use of one's own property. (11)

RESPONSE: The Department believes the rules do not prohibit or discourage applications to correct situations that impact the use of real property. However, any such solution must comply with the rules and must be properly permitted by the administrative authority.

24. COMMENT: The terms "injuries to property" and "infringement on property rights" at N.J.A.C. 7:9A-1.6(m) require additional definition. A neighbor could interpret that their property has been injured or infringed upon simply by installing a system within setbacks defined by the rules. It should be made clear that if the rules are followed, then no injury or infringement has occurred by definition. (15)

RESPONSE: See the Response to Comment 22. The Department is not adopting the proposed provision at this time.

N.J.A.C. 7:9A-1.7 Penalties

25. COMMENT: N.J.S.A. 58-11-23, the "Realty Improvement Sewerage and Facilities Act" (RISF Act), has a penalty section that indicates a $200.00 penalty for each offence (see N.J.S.A. 58-11-39). The regulations under this section, N.J.A.C. 7:9A-1.7, refer back to the Water Pollution Control Act under N.J.S.A. 58:10A-1 et seq. There have been some concerns as to what court is of competent jurisdiction to hear these matters and whether or not local health departments can issue administrative penalties for septic system issues pursuant to the Water Pollution Control Act (WPCA). The NJDEP should clarify which statute should be used when citing violations, the court of competent jurisdiction and whether the administrative authority can issue administrative penalties pursuant to the WPCA. (7)

RESPONSE: Administrative authorities and their authorized agents have the authority to enforce septic tank violations under the WPCA in municipal court. The WPCA, at N.J.S.A. 58:10A-10.4, grants the Department the authority to issue summons for violations of the WPCA where the penalties are $5,000 or less, with the summons being enforceable in municipal court. Furthermore, for those authorities that are regulated under the County Environmental Health Act, N.J.S.A. 26:3A2-28 allows the Department to delegate its authority under the WPCA to a certified local agency. The Department delegates that authority to the county agencies through

individual contracts with each agency. Under the County Environmental Health Act, the appropriate county health department may bring an action in a court of competent jurisdiction (in this case, the municipal courts) to enforce violations of the WPCA. N.J.S.A. 26:3A2-25.

N.J.A.C. 7:9A-2.1 Definitions

26. COMMENT: Definitions currently contained in N.J.A.C. 7:9A-2.1 which are not being changed are not shown as "no change." Instead they are not listed in any manner. Will definitions which are not being changed through additions/deletions be retained in the revised regulation. If they are meant to be retained, shouldn't they be shown (for example, "Administrative authority" no change)? Without being shown in this manner, will they still be part of the revised regulation? (19)

RESPONSE: Where only certain definitions in a definition section containing un-numbered definitions are being amended, New Jersey Register publication format is that definitions that are currently in the Code that are not being proposed for amendment or deletion are not individually reproduced in the proposal. Instead, where there are definitions that are not being proposed for amendment, agencies are required to place an ellipsis (. . .) to show that material has been omitted. This format was followed in this proposal. Accordingly, any definitions in the rules prior to this proposal that did not appear in the proposal continue to be part of the rules without change. The Department identified in the rule proposal at 43 N.J.R. 516 that the full text of the

rules proposed for readoption may be found in the New Jersey Administrative Code at N.J.A.C. 7:9A.

27. COMMENT: In the definition for “active grease removal component,” the terms should be biochemical and chemical oxygen demand (BOD and COD respectively), not biological … oxygen demand. (19)

RESPONSE: The Department agrees with the commenter and has made the appropriate correction. As indicated in the Response to Comment 28, the Department is also changing the term "active grease removal component" to "high strength wastewater pretreatment component" to more closely reflect industry terminology.

28. COMMENT: The term “Active grease removal component” is not recognized in the grease industry and it is unclear what type of device or technology is available. (15)

RESPONSE: The Department believes that the definition adequately specifies the type of equipment that is considered to fall under this definition. However, the Department has determined that it is appropriate to change the term "active grease removal component" to "high strength wastewater pretreatment component" to more closely reflect industry terminology. The Department has similarly substituted the term "high strength wastewater pretreatment component" for the term "active grease removal component" where that term appears throughout

the rule. As indicated in the proposal, these components are part of the minimum treatment requirement for all commercial food service activities, including institutional kitchens. This change in terminology does not impact who is regulated nor does it modify the requirements applicable to regulated entities.

29. COMMENT: The definition and subsequent discussion of “advanced wastewater pretreatment device(s)” at N.J.A.C 7:9A-2.1 and “advanced wastewater treatment system components” at N.J.A.C. 7:9A-8.3 should be expanded to include advanced wastewater treatment technologies that are authorized for use in the Pinelands Area through the Pinelands Advanced Wastewater Treatment Systems Pilot Program at N.J.A.C 7:50-10.23. (25)

RESPONSE: The Department agrees that advanced wastewater pretreatment components authorized for use by the Pinelands Advanced Wastewater Treatment Systems Pilot Program qualify as advanced wastewater pretreatment devices and is modifying the definition of “advanced wastewater pretreatment device” as requested to specifically address the issue. However, since those technologies are already authorized under a generic treatment works approval and need to comply with the requirements of the Pinelands Commission rules, it is not necessary for the Department to make additional changes at N.J.A.C. 7:9A-8.3 to further identify the applicability of those technologies to these rules.

30. COMMENT: Only allowing NSF Standard 40 and 245 systems bearing the mark under the definition of “Advanced wastewater pretreatment device(s)” will exclude many viable treatment

systems that have been tested to more rigorous standards in the U.S. and in other countries. For example, the Bureau de Normalisation du Quebec (BNQ) Standard NQ 3680-910 tested technology for CBOD5 and TSS reduction or other parameters; and the European Committee for Standardization (CEN) Standard EN 12566-3:2005 tested technology for BOD5 and TSS reduction or other parameters include testing periods that are twice as long as NSF. Also, some technologies have been tested to ANSI standard protocols, but do not bear a listing mark. Lastly, requiring manufacturers to have a five year component warranty period will give the citizens of New Jersey more robust and long-term cost effective solutions that are more protective of the public health and the environment. (3)

RESPONSE: The Department acknowledges that there are many national and international testing organizations that can provide third party verification of the treatment capacity of a given technology. However, the Department believes that in order to establish a program that relies on a third party, the certification program must go beyond testing the effectiveness of a technology's ability to treat. NSF International's certification program also includes ongoing auditing of manufacturing and reporting requirements to ensure that the technology continues to be properly manufactured and managed. This includes warranty durations. The Department has adopted the NSF International warranty duration to maintain consistency with those certifications. The Department also acknowledges the value of the duration of testing by other agencies. NSF International is working on updating and expanding its certification programs as evidenced by the recent addition of Standard 245 and draft Standard 360 for the field verification of technologies. As the Department gains knowledge and experience working with these technologies, additional certification programs may be considered in future rulemaking.

31. COMMENT: The Department should add a definition of “artesian groundwater condition” to the rules. In addition a pointed reference needs to be made to the fact that soil replacement systems may not be used where regional groundwater rises above a hydraulically restrictive soil horizon in Table 10.1 Type of Disposal Field Installation. Over the course of the last 20 years we have witnessed numerous instances where this unsuitable condition has been missed by both septic system designer and administrative authority professionals. (28)

RESPONSE: An artesian groundwater condition is the same as an "artesian zone of saturation", which is already defined in N.J.A.C. 7:9A-2.1 and artesian groundwater conditions are currently identified and explained in the rule at N.J.A.C.7:9A-5.8, Criteria for recognition of zones of saturation. While the Department agrees that there have been occasions where artesian zones of saturation are overlooked or otherwise missed by the septic system designer and soil evaluator, it is the responsibility of the soil evaluator and septic system designer to identify those limiting conditions prior to submitting an application for an individual subsurface sewage disposal system. The Department further acknowledges this condition to be unsuitable for the installation of any system under the chapter, including soil replacement systems. Accordingly, administrative authorities should reject any application where this condition may be present without the appropriate tests to demonstrate the condition is not artesian. Modification of Table 10.1 is not necessary since the issue is specifically dealt with at N.J.A.C. 7:9A-5.8(g).

32. COMMENT: Authorized installers, in accordance with the definition of the term, should have to be registered and submit all their documentation to the Department and the administrative authority in whose jurisdiction they intend to operate. (7)

RESPONSE: The Department believes that, due to the proprietary nature of each individual type of technology that requires an authorized installer to install that technology, individual authorizations should come from the manufacturer of those technologies. In order to demonstrate that the individuals installing those technologies have a level of knowledge acceptable to the Department to be considered for authorization by the manufacturers, the Department is also requiring those individuals to obtain accreditation from the National Environmental Health Association Certified Installer of Onsite Wastewater Treatment Systems (CIOWTS) at the advanced level. Many jurisdictions have also adopted ordinances to require various levels of licensing and/or registering of installers that work in those regions. While the Department may have the general authority to institute a program at the State level similar to a program suggested for septic system inspectors (see the Response to Comment 9), the Department believes it most appropriate to have specific legislation authorizing the institution of such a program to strengthen the Department's ability to administer such a program. To date no legislation has been proposed, although these individuals are typically subject to the registration requirements of the New Jersey Contractor's Registration Act N.J.S.A. 56:8-136 et seq.

33. COMMENT: The Department should change the proposed definition of "authorized service provider" to limit authorized service providers to those individuals specifically trained and

authorized by the manufacturer of an alternative technology or its authorized representative. There is no reason to believe that an individual who holds an S2 or greater license as a wastewater treatment operator would have an understanding of the specific requirements of any particular alternative technology, unless they are trained by the manufacturer or its representative. The concern is that even if a person has an S2 license, they still need to know the intricacies of each component or treatment train and should be trained by the manufacturer. (4, 5)

RESPONSE: There are two primary reasons the Department is not making the suggested change upon adoption.

First, if an equipment manufacturer goes out of business, system owners might not have the ability to comply with the rule requirements or to service those units. Similarly, many manufacturers currently have only one or two authorized individuals to provide these services. If those authorized individuals stop providing those services for any reason, there may be substantial lag time for the manufacturer to train new authorized service providers, creating compliance problems for existing system owners. The definition assures that all system owners will be able to comply with the provision of the rule.

Second, the requirements for an S2 licensed operator are not trivial. In addition to basic levels of education and general knowledge of wastewater systems and wastewater treatment processes similar to advanced wastewater treatment systems authorized by these rules, the rules governing those licensees (N.J.A.C. 7:10A) require the performance of certain duties, including record keeping and reporting. Those minimum duties include the licensed operator having the required documentation regarding the proper Operation and Maintenance (O&M) procedures for

the specific treatment unit being serviced. Anyone lacking the S2 (or better) license must be authorized in writing by the manufacturer to be considered an authorized service provider.

34. COMMENT: All "authorized service providers" should have to be registered and submit all their documentation to the Department and the administrative authority in whose jurisdiction they intend to operate. (7)

RESPONSE: The Department believes that, due to the proprietary nature of each individual type of technology that requires an authorized service provider or an individual with an S2 wastewater treatment plant operator license to service that technology, it is more appropriate that individual authorizations come from the individual manufacturer of those technologies or from the Department in the case of an S2 licensed operator. Documentation regarding authorization or license status should be producible at the time of installation and may be required by an administrative authority or the Department in advance. The administrative authority may also institute a program to require all authorized service providers to register in advance through the adoption of an ordinance. While the Department may support a program at the State level similar to a program suggested for septic system inspectors (see the Response to Comment 9) or authorized system installers (see the Response to Comment 32), the Department believes it most appropriate to have specific legislation authorizing the institution of such a program to strengthen the Department's ability to administer such a program. To date no legislation has been proposed.

35. COMMENT: The proposed rule readoption with amendments does not provide any amendment to the definition of bedroom or direction as to what constitutes an additional bedroom when a building plan is submitted for review to the administrative authority prior to a building permit being issued on an existing house. (19)

RESPONSE: The Department does not believe the term “bedroom” needs further definition or explanation. The existing rule defines the term "bedroom" (and by way of reference the related defined term "expansion attic") as “any room within a dwelling unit, finished or unfinished, which may reasonably be expected to serve primarily as a bedroom or dormitory. The term bedroom shall be considered to include any room or rooms within an expansion attic.” This term is purposefully broad to ensure that onsite systems are designed to handle the maximum estimated volume of sanitary sewage generated at a realty improvement to ensure that reasonable future use of that realty improvement does not exceed the capacity of the sewerage utility. The designation of bedrooms for the purposes of designing an individual subsurface sewage disposal system may be different from the rules governing building, design and/or construction, because it may be the intent of the individual designing the realty improvement to have an office, den, library or other type of room labeled on architectural drawings, but the room could reasonably be used as a bedroom by subsequent property owners. As such, adding a bedroom, or any room that could reasonably be used as a bedroom in the future, to an existing structure would require that a fully conforming system be installed for the realty improvement in order to complete any certificate of occupancy for the expanded realty improvement.

36. COMMENT: The examples listed in the definition of “commercial food service activity” include the term “mini market.” However there is no supplementary definition of exactly what a “mini market” is. There are many examples of “mini markets" that may sell goods that are prepared and packaged at an alternate location. With the current definition, this type of use could create a higher daily sewage design flow than would actually be generated at the “mini market.” (8, 28)

RESPONSE: The Department agrees that there are many types of facilities that could be considered "mini markets." However, the changes to the rule being adopted at this time focus on the activity rather than the name of the facility. Accordingly, the lack of any food preparation equipment at a proposed facility where foods are prepared and prepackaged at another location would be one factor considered in determining whether the facility should be classified as a "commercial food service." However, even absent the presence of food preparation on-site, the use of commercial grade coffee machines, soda dispensers, ice makers and the like would qualify many facilities under that category. These types of activity could require that the facility be considered for a Treatment Works Approval for flow and to address issues related to the high strength of wastewater typically associated with those types of activities.

37. COMMENT: Definitions are needed for "common plan of development" and "common plan of sale." Changes were made to the New Jersey Pollutant Discharge Elimination System (NJPDES) rules on January 5, 2009 to the definition of the term "property" and a new definition was included for "common plan of development or sale". (9)

RESPONSE: The changes made in the NJPDES rules on January 5, 2009 included identical amendments to this chapter on that date. For further information, see the Response to Comment 19.

38. COMMENT: The current New Jersey guidance documents allow for open bottom disposal from treatment units. Since this practice is allowed in New Jersey, this should be part of the definition of “disposal field.” (3)

RESPONSE: The Department acknowledges that current guidance for altering existing, malfunctioning systems includes an option for open bottom disposal designs. However, it was never the intent of that guidance to allow that option as a design option that would be considered conforming to the rules. Rather, that option is to provide for an acceptable standard in the event that a conforming disposal option was not feasible. While open bottom designs do not strictly conform to the Standards, in accordance with N.J.A.C. 7:9A-3.3(e)2ii. if an existing, malfunctioning system cannot be replaced with a conforming system, an open bottom design in accordance with existing guidelines could be considered. Since this design type was previously acknowledged in Department guidance, the Department would consider this disposal option protective of human health and the environment and could be an acceptable alternative if that type of design is appropriate for the site specific constraints when a conforming design cannot be accommodated.

39. COMMENT: The definition of “disposal field” should include " …the perimeter of the disposal bed, or the outermost extent of filter material in a fill enclosed system, and the extent of the level fill extension in a mounded system…" (19)

RESPONSE: The Department revised the definition upon adoption to be consistent with existing policy as published in the Department’s Frequently Asked Questions (FAQ) guidance (2003) and with the application of setbacks required pursuant to N.J.A.C. 7:9A-4.3. However, the Department modified the language from that proposed by the commenter to “…the perimeter of the disposal bed, or the outermost extent of fill material in a fill enclosed system, and the extent of the lateral fill extension in a mounded system…" to be consistent with the FAQ and the existing rule text at N.J.A.C. 7:9A-4.3 Table 4.3, footnote (11). Fill enclosed disposal systems have been addressed in the Standards since 1990 at N.J.A.C. 7:9A-10.4(c), which states a two foot extension of fill material is required beyond what is required for a conventional or bottom lined soil replacement system. Mounded systems have been addressed in the Standards since 1990 at N.J.A.C. 7:9A-10.5(e) to establish the lateral extent of fill material, ranging from five to 20 feet, required for those systems. This change is consistent with the existing rule text that identifies how to apply the appropriate setbacks at N.J.A.C. 7:9A-4.3.

40. COMMENT: It is confusing that the word ‘drip’ appears in front of ‘disposal bed’ in the definition of “disposal field”, but not in front of "disposal trenches" in that same definition. (27)

RESPONSE: The Department acknowledges that the word "drip" should not appear before the term "disposal bed." As identified in the proposal at 43 N.J.R. 482, the intention of this amendment was to explicitly include in the definition of “disposal field” a reference to drip dispersal areas, which are addressed at N.J.A.C. 7:9A-10.8. The word “drip” is more appropriately located in front of the words “dispersal area” later in the definition. Accordingly, the Department is making this change on adoption.

41. COMMENT: Under the definition of “drip dispersal.” there does not appear to be any connection in the proposed design criteria that ensures that saturated subsurface conditions will not be created. If it is intended that the frequency of dosing is the means to accomplish this, it is still not clear that saturation is being avoided. If proper functioning requires unsaturated conditions, this should be identified somewhere in the design section. There is no apparent connection in the proposed design criteria of dosing frequency to permeability rate or the Long Term Acceptance Rate (LTAR). (18)

RESPONSE: The Department has revised the rule upon adoption at N.J.A.C. 7:9A-10.8(d)1 such that the dosing frequency must be optimized by the system integrator to avoid soil saturation as described by the proposed definition for “drip dispersal” and discussed in the proposal at 43 N.J.R. 506.

42. COMMENT: The definition of “existing ground surface” should be amended to include the term “elevation” and require the mandatory identification and depiction of surface topography

tied to a fixed onsite benchmark with a defined elevation. Language should also be added to specify how the original ground surface elevation is to be accurately established in the case of manmade modifications or disturbance cause by grade cuts. (25)

RESPONSE: Original and existing ground surface issues are addressed at N.J.A.C. 7:9A-5.10, Disturbed ground. The Department does not believe that expanding the definition would be appropriate to address these issues. N.J.A.C. 7:9A-5.10 describes how system designers must address those situations where fill material has been added or existing soils have been removed from a site, modifying the original ground surface. The remaining issues discussed in the comment are related to surveying, engineering and design work related to the development of site plans, which are specified by the rules at N.J.A.C. 13:40-7, the State Board of Professional Engineers and Licensed Surveyor rules.

43. COMMENT: The definition of "existing ground surface", which reads “the level of the ground surface prior to any manmade modification or disturbance” needs to be modified. In light of the fact that most of our State’s surface has been manipulated over the course of the last few hundred years, coupled with the fact that septic system designers are measuring soil horizons to the nearest inch, makes the proposed definition unworkable. In addition, the proposed definition, when tied to the principle of regrading, appears to be prohibiting the use of disposal beds on regraded slopes in light of the proposed set of standards. This is a design alternative that should be allowed. (8, 28)

RESPONSE: The change to the definition of "existing ground surface" modifies the point of elevation which is considered at the time of designing a system. Sites that have been regraded have been and will continue to be allowed through N.J.A.C. 7:9A-5.10, Disturbed ground, which specifies how to deal with modified ground surfaces, including both those areas where fill has been added to a site and those where material has been removed from the site. There is no change in this definition to preclude the installation of a system on a regraded site unless the site has been regraded to a point that exceeds the limits of N.J.A.C. 7:9A-5.10.

44. COMMENT: The added phrase, "has not been physically altered", is misleading in the definition for "fill." A screened or sieved soil has been physically altered and thus would not herein qualify as "fill." The process of sieving is altering the soil physical property of texture. After reading 43 N.J.R. 518, the commenter indicates they understand the intent, however the definition, as worded, is not consistent with soil science definitions. (18)

RESPONSE: The process of sieving is altering a soil physically. However, the definition specifically excludes sieving as a prohibited form of physical alteration. Accordingly, the Department does not believe that the definition is inconsistent with soil science definitions. The proposed definition for "fill" at 43 N.J.R. 518 which specifically states "…which meets or can be sorted to meet…" addresses the physical sorting of soil particles through a sieving or any other sorting process provided this was the only physical alteration to the soil material. Designs that incorporate materials that have been blasted, crushed or otherwise physically altered should

not be approved by the administrative authority unless specifically authorized by a treatment works approval issued by the Department pursuant to N.J.A.C. 7:9A-3.9.

45. COMMENT: In the definition of "individual subsurface sewage disposal system", use of the word "or" in the phrase "…retain most of the settleable solids in a septic tank or may incorporate…" conveys that the advanced pretreatment device may supplant the septic tank. It is the commenter's understanding that the pretreatment devices generally follow the septic tank in the waste stream. (18)

RESPONSE: In many cases, the advanced wastewater pretreatment device is preceded by a fully conforming septic tank. However, there are instances where a technology does not perform well unless additional solids are introduced into the advanced wastewater pretreatment unit. In those cases, a fully conforming septic tank prior to the treatment unit will result in a system that cannot produce the treatment levels necessary. Therefore, if the manufacturer of the advanced wastewater pretreatment device can demonstrate that the NSF certification of the system allowed for an alternative design that did not include a fully conforming septic tank prior to the advanced wastewater pretreatment device, an alternative primary settling treatment tank would be allowed. However, as discussed in Response to Comment 183, all advanced wastewater pretreatment devices must be preceded by a primary settling component.

46. COMMENT: The proposed definition of "individual subsurface sewage disposal system" states "discharges liquid effluent of typical domestic strength." Since later sections of the

regulations discuss the higher strength of food service discharges, does this mean that food services uses do not use an ISSDS and therefore cannot be approved under N.J.A.C. 7:9A? (8)

RESPONSE: No. The rules provide for treatment of waste from food service activities to levels equivalent to residential strength waste, which is then discharged to an appropriate disposal field as discussed in the proposal Summary for N.J.A.C. 7:9A-8.1 at 43 N.J.R. 500. These components should not be confused with those addressed at N.J.A.C. 7:9A-8.3, which further reduce waste strength to secondary treatment levels for which the area of the disposal field or the required zone of treatment may be reduced. However, if the high strength waste pretreatment component can reduce the wastewater strength to levels associated with the USEPA secondary wastewater treatment standards as discussed at 43 N.J.R. 501-502, those reductions allowed for advanced wastewater pretreatment units under N.J.A.C. 7:9A-8.3 may be considered by the administrative authority.

47. COMMENT: A definition is needed for “professional land surveyor” to read “ a person licensed to practice professional land surveying in this State pursuant N.J.S.A. 48:8-27 et seq." The reason this is necessary is because some of the requirements for plans, boundary survey and topographic surveying in distances to the boundary needs to be done by a professional land surveyor. The Department should also add a definition for “Practice of Land Surveying”. (27)

RESPONSE: While the Department agrees that a licensed professional surveyor is needed for certain aspects of site plan development, the septic system designer who is a licensed

professional engineer is responsible for understanding the rules governing those licenses and developing site plans. The rule at N.J.A.C. 7:9A-3.5 references the State Board of Professional Engineers and Land Surveyors rules, N.J.A.C. 13:40-7, which govern the development of site plans by professional engineers and land surveyors and contains the appropriate definitions.

48. COMMENT: This code should not only better define the term “septic system inspector” but the NJDEP should develop an educational, testing and State licensing program in order to protect the public from individuals and companies that do not have complete knowledge of all of the various types of systems and new rules proposed here. (7)

RESPONSE: The Department is expanding the definition to specifically use the words in the definition consistent with the heading of N.J.A.C. 7:9A-12.6, which is cited in the current definition, modifying the definition to “…a person who performs inspections of systems in accordance with N.J.A.C. 7:9A-12.6 for inspections during real property transfers” upon adoption. While the Department agrees that there could be benefits to a licensing program, as indicated in Response to Comment 9, the Department believes that in this context a licensing program is most appropriately established based upon specific statutory authority. The Department is also working with several institutions, such as Rutgers University and the Pennsylvania/New Jersey Septage Management Association to establish training events on the protocol for the public.

49. COMMENT: The definition of “septic system inspector” would lead to the misunderstanding that N.J.A.C. 7:9A-12.6 establishes an inspection protocol that is mandated as the only way to perform septic system inspections. Since the protocol is not required, there will continue to be many individuals and companies that perform system inspections but choose not to follow the NJDEP’s recommended protocol for inspections. If they do not meet the new definition, what title would they be given, if they are not “septic system inspectors”? (5)

RESPONSE: Since the rules establish the protocol for septic system inspections during real property transfers, the label of "septic system inspector" under the rules only applies to those individuals conducting septic inspections in accordance with that protocol. Therefore, pursuant to the rules, any inspection of a septic system for purposes of real property transfers that does not follow the minimum criteria established in the protocol is not a Department recognized inspection. If an individual or company inspects a system in a manner inconsistent with the rules, the rules do not address what title is given to those individuals since they have chosen to operate outside of the rules. It is the Department’s goal to work with those in the real property transfer industry to encourage and specifically identify the use of the regulatory protocol during real property transfers involving onsite systems.

50. COMMENT: The definition of “septic system inspector” should mandate possession of a New Jersey Professional Engineers License, a New Jersey Registered Environmental Health Specialist License or a New Jersey Health Officers License. The Department incorrectly states in the rule preamble that it “does not license or otherwise credential septic system inspectors.” This

statement fails to acknowledge that the NJDEP, through its Examination and Licensing Unit, issues licenses to both New Jersey Registered Environmental Health Specialists and New Jersey Licensed Health Officers, both of which are authorized by enabling legislation to inspect septic systems. (25)

RESPONSE: The Department does not regulate, issue or otherwise oversee the licensing requirements for Licensed Health Officers or Registered Environmental Health Specialists. Those licenses are administered by the Department of Health and Senior Services. Also see the Response to Comment 8 regarding licensing of septic system inspectors.

51. COMMENT: The proposed definition for “sink station activities” puts beauty salons in the same category as a slop sink or janitorial sink. These are very different uses and trying to put them together for flow calculation purposes is not realistic. It is virtually impossible to envision a slop sink or janitor’s sink that uses 120 gallons per day. Most, if not all, commercial buildings have one of these sinks required by code and they have only marginal use. The flow associated with janitorial work should be part of the base flow of the use. Absent specific documentation that commercial buildings use 120 gallons per day more water than those without janitorial sinks, it seems this definition, and associated design flow, is unsupportable. It also makes virtually every commercial ISSDS a non-compliant system since it was likely designed without the additional allowance. (8)

RESPONSE: The Department's intention in proposing the definition was to capture those wastewater generating activities associated with significant additional flow. Upon further consideration, the Department agrees that janitorial and custodial sinks do not generate sufficient additional flow to warrant consideration beyond the primary wastewater generating activities at the facility. Therefore, the Department is not adopting the example references to custodial, janitorial and slop sinks and such flows will be included within the flow attributed to the primary wastewater generating activities at the facility.

52. COMMENT: The proposed definition of "water course" implies that a foundation drain for a home would need to be defined as a water course. If that is the Department's intent, then a footnote needs to be added to the Minimum Required Separation Distance Table that clearly alerts both the septic system designer and administrative authority that where groundwater conditions dictate, the separation distance from a home to a septic field needs to be at least 51 feet (considering the foundation drain would be located approximately one foot from the building perimeter). (28)

RESPONSE: All existing and proposed foundation drains are currently, and will continue to be, required to be located on all site plans in accordance with N.J.A.C.7:9A-3.5(c)2iii. If a foundation drain is present at a width of one foot from the perimeter of a dwelling, an appropriate setback would be 51 feet, unless the exception provided for at N.J.A.C. 7:9A-4.3 Table 4.3 Minimum Required Setback Distances, footnote (5) is applicable. This footnote, which has existed in the rule since 1990, allows a 50 percent reduction in the required setback if

the water course is a footing drain with an invert elevation higher than the bottom of the disposal field or more than four feet above the level of the seasonally high water table.

53. COMMENT: Is a subsurface storm water piping system a “water course" if the piping is reconstructed (that is, removed and replaced) within 50 feet of a proposed ISSDS so that this portion within 50 feet is “… constructed in a manner that will prevent infiltration of ground water into the pipe or lateral movement of ground water through the excavation in which the pipe has been laid”, but the remaining portion of the piping system further than 50 feet is not constructed in said manner and this system eventually discharges to an above ground outlet or surface water? (19)

RESPONSE: An existing stormwater piping system that is defined as a “water course” could be removed and the piping reconstructed (that is, removed and replaced) within 50 feet of a proposed ISSDS so that it would no longer be considered a “water course”. The reconstructed portion within 50 feet of the disposal area must be constructed in a manner that prevents infiltration of ground water into the pipe or lateral movement of ground water through the excavation in which the pipe has been laid. The remaining portion of the piping system further than 50 feet from the disposal area does not need to be constructed in a similar manner.

54. COMMENT: The term “water course” requires further definition. For example, is a non-perforated/watertight pipe that connects components of a storm water system considered to be a water course since there will not be any ground water infiltration into that pipe? (15)

RESPONSE: The Department believes the proposed definition adequately addresses the commenter's issue. The example provided does not provide sufficient information to make a determination whether the pipe would be considered a water course. It would be necessary to determine if the piping is constructed in a manner that prevents infiltration of ground water into the pipe or lateral movement of ground water through the excavation in which the pipe has been laid. If both conditions are met, then the piping would not be considered a water course.

55. COMMENT: The proposed definition for "water service line" seems to include an effluent line or building sewer since it conveys non-potable water. (8, 28)

RESPONSE: This definition identifies the conveyance of a water source rather than a wastewater or effluent since water "service" lines refer to flow to a structure rather than waste leaving a structure. The definition for a water service line must only be applied to lines conveying water sources, not wastewater or effluent lines.

N.J.A.C. 7:9A-3.3 Existing systems

56. COMMENT: The code should reference the Elder Cottage Housing Opportunity (ECHO) Code and indicate if structures or additions built pursuant to ECHO are exempt from the proposed code. The ECHO code allows for "A direct connection between the building sewers of the ECHO unit and the principal dwelling facilitated through the installation of a grinder pump."

Grinder pump installations now have additional design criteria (from the time of the adoption of the ECHO Code). Do they have to now adhere to the new grinder pump requirements? (7)

RESPONSE: The Department believes the commenter is referring to the Federal Elder Cottage Housing Oppurtunity (ECHO) program rules at 24 CFR 92.258. The Department established a permit-by-rule for ECHO housing units on April 19, 1995 pursuant to N.J.A.C. 7:14A-5.17, which has been subsequently recodified, presently at N.J.A.C. 7:14A-8.5. Therefore, if the conditions of the permit-by-rule are met, no further modification to the system serving that ECHO unit is necessary, including any new provisions regarding grinder pumps. Electronic copies of the permit-by-rule are available from the Department by request at CH199@dep.state.nj.us.

57. COMMENT: The requirement for professional oversight of repairs by a septic system designer (SSD) is long overdue and a step in the right direction. The “repair option” to correct a malfunctioning system has been abused throughout the State and generally results in a poorly corrected substandard system that is often represented as a “new system” during real estate transactions. References to required certifications by the SSD with respect to disposal fields should, at a minimum, be expanded to include trenches, seepage pits, and any other absorption area. Ideally, certifications by the SSD should be required for the repair of any non-conforming system that was installed or approved prior to 1990, regardless of the component being repaired. A clear example is a repair permit granted to “repair” a disposal field when the true culprit is a non-watertight septic tank within ground water. (15)

RESPONSE: The Department acknowledges the comment in support of the amendment. It is noted that a septic system designer is required to certify work during repairs to disposal fields. By definition, disposal fields include all trenches, seepage pits and any other absorption area in addition to traditional disposal beds.

58. COMMENT: N.J.A.C. 7:9A-3.3(b) needs to be eliminated as written. The NJDEP appears to wish to stop a house from being demolished (perhaps leaving one wall and the foundation) and then being rebuilt to a larger square footage or in a manner that will probably increase wastewater flow. It is also a serious financial burden to property owners who want to improve their dwellings. The regulation should state the reconstruction cannot increase square footage of living space or exceed the number of floors which existed prior to the reconstruction. A reconstruction project may be needed and may not result in any increase in wastewater flow. For example, a dining room that needs the support beams replaced which have been severely damaged and weakened by boring insects, or a toilet or shower leaking over time and rotting away structural supports would fall under the definition of a reconstruction as defined by N.J.A.C. 5:23-6. Under this UCC code, "Reconstruction means any project where the extent and nature of the work is such that the work area cannot be occupied while the work is in progress and where a new certificate of occupancy is required before the work area can be reoccupied. Reconstruction may include repair, renovation, alteration or any combination thereof." "Work area means any entire use, primary function space, or tenancy comprising all or part of a reconstruction project as delineated on the approved permit application and/or plans."

"Primary function space means a room or space housing a major activity for which the building or tenancy is intended including, but not limited to, office area, auditorium, assembly space, dining room, bar or lounge, warehouse, factory, dwelling, care, confinement, retail, and educational spaces, but not including kitchens, bathrooms, storage rooms or other spaces supporting a primary function space…". Therefore this dining room project would entail a primary function space, the entire room would be the work area and the replacement of the structural beams would require a new certificate of occupancy to reoccupy the room once the work was completed. If this house was constructed prior to August 18, 1999, the house would be required to have a holding tank since the damage was not the result of "…a catastrophic event, such as fire, storm or flood. (8, 19)

RESPONSE: Reconstuction work to address extensive damage from wood boring insects, water and/or other wood rot structural problems that have gone unnoticed by an existing property owner is a replacement-in-kind, would qualify as a catastrophic event and would be grounds for an administrative authority to allow an exception from this requirement pursuant to N.J.A.C.7:9A-3.3(b)2i. Further, if a nonconforming system is deemed satisfactory by a septic system designer pursuant to N.J.A.C. 7:9A-3.3(b)2, the system could continue to be used without upgrade. It is also important to keep in mind that a conforming system design can now include advanced wastewater pretreatment devices at N.J.A.C. 7:9A-8.3, which provides allowances for reduced sized disposal fields, in terms of both mound heights and area required. Further, such a project could also apply for a nonconforming system through the treatment works approval process under N.J.A.C. 7:9A-3.9 if a viable alternative system could be designed for the reconstructed structure.

59. COMMENT: The requirement that any interior or exterior renovation that requires a Certificate of Occupancy needs a fully compliant or replacement system could prevent a property owner from making necessary or desired improvements to their property where full compliance is not possible due to limited disposal area and or noncompliant soil and groundwater conditions. On top of which would be the serious financial burden that constructing a fully compliant septic system would cost. For the purposes of this section, the need for a fully compliant system should be only required where an intensification of use is proposed. To limit interior or exterior renovation of an existing structure to only those properties that can support fully compliant septic systems is a severe hardship to countless property owners across the State. (28)

RESPONSE: Allowing substandard sewerage systems for rehabilitated structures would be akin to allowing other substandard utilities throughout that rehabilitated structure. For example, if a living room addition is made to an existing structure; many code officials require the installation of appropriate fire alarms throughout the structure. Similarly, if substandard wiring is in place throughout the house, rewiring and/or electrical panels that meet current code are typically required. Property owners with privately owned sewerage facilities must provide an adequate sewer utility for the property. To limit the impact to current property owners, the Department is essentially grandfathering existing systems and not requiring all systems to upgrade, provided there is no change to the structure at N.J.A.C. 7:9A-3.3(a). However, upgrading the sewer utility when other changes and upgrades are being made is appropriate.

60. COMMENT: What is the rationale for using August 18, 1999 at N.J.A.C. 7:9A-3.3(b)2ii? There were updates to the rules at this point, but they were not as substantial as those in 1990 and, in fact, did not make a substantial change in the design or operation of systems. (8, 27, 28)

RESPONSE: The Department is amending the date for regulatory compliance upon adoption, however not to 1990 as requested. The date August 19, 1999 was proposed, as discussed at 43 N.J.R. 486, due to the updating of the rules at that time. While there were some changes made at that time, the general integrity of soil evaluations and system designs were consistent with those done under the January 1, 1990 effective date of the previous rule. However, the Permit Extension Act of 1992 (P.L. 1992, c. 82), expired on December 31, 1996. The Permit Extension Act was designed to respond to New Jersey's state of economic emergency by extending the duration of certain governmental approvals and permits that otherwise would have expired between January 1, 1989 and December 31, 1996. Most of these permits were related to construction, including septic system approvals. As a result, systems designed and approved prior to 1990 were still permitted to be installed and certified up to December 31, 1996. Therefore, the Department has changed the proposed August 19, 1999 date to December 31, 1996 to reflect when requirements similar to those contained in the rules on January 1, 1990 first became applicable to all projects.

61. COMMENT: Under N.J.A.C. 7:9A-3.3(c) 1 and 2, what constitutes “demonstrates … adequate to treat and dispose of the estimated volume …”? Does this mean the engineering plan was designed for a volume of wastewater flow equal to or greater than the proposed increase and

this plan clearly stated this flow? This section appears to allow designers to certify systems can handle additional flow. On what is this certification supposed to be based? If this is the condition under which the administrative authority can approve this wastewater increase, then this section should state this. If there are other circumstances where a system wastewater flow can be increased without altering the system, then the Department should state these as well. Otherwise this section is too vague and will lead to debate, argument and misinterpretation. (8, 19, 25)

RESPONSE: The Department believes the rule is clear that what constitutes "demonstrates … adequate to treat and dispose of the estimated volume" as identified at N.J.A.C. 7:9A-3.3(c)1 and 2 can be summarized as either 1) a prior written approval that supports a higher volume than what currently exists or 2) a licensed professional engineer's certification to document that a higher volume than currently exists can be supported by the existing system. This could mean that a previously approved engineering plan was designed for a volume of wastewater flow equal to or greater than the proposed increase and this plan clearly stated this flow, provided the system was certified or other proof can be provided to demonstrate that system was actually installed. This section does allow a licensed professional engineer to certify systems to handle additional flow. This certification should be based on documented existing conditions, an evaluation of existing components to be currently functioning as originally designed and an evaluation of the system compared to current rule requirements. An engineer simply certifying that the system will treat and dispose of wastewater without using a standard recognized by the administrative authority, such as this Chapter, would not be consistent with the definition of "engineering" at N.J.A.C. 13:40-1.3. Additionally, since having an adequate zone of treatment is

a requirement to comply with the requirements of this chapter, demonstrating the presence of an adequate zone of treatment, if that is a concern, should be required by the administrative authority prior to authorizing any system's continued use. However, any system that would exceed the limitations at N.J.A.C. 7:9A-1.8 must be referred to the Department for approval.

62. COMMENT: The section on repairs (N.J.A.C. 7:9A-3.3(d)) is very specific about restoring the “original” location, etc. of the system. Is this the original design or the original as-built condition? If a system was designed with a 1,000 gallon tank, for example, and a 1,500 gallon tank was installed, is it a repair or an alternation to put a 1,000 gallon tank in place? How about were the design called for a 1,500 gallon tank and a 1,000 gallon tank was installed? The same question applies to all system components. Given the fact that septic systems are constructed with large pieces of excavating equipment that are not precise, there are likely some discrepancies between the design and the as-built condition. Which must be restored? (8)

RESPONSE: The language in the proposed rule text is taken directly from the previously existing rule text regarding repairs at N.J.A.C.7:9A-3.3(g) and the previously existing definition of the term "repair". If there is a discrepancy between the system that exists and the system that was approved by the administrative authority, the administrative authority should investigate that discrepancy and require what was on the approved engineering design be installed, unless field changes were authorized in accordance with N.J.A.C.7:9A-3.7, in order to be considered a “repair” and not an “alteration”. N.J.A.C.7:9A-3.7(b) continues to identify that any modification to plans or specifications made without approval of the administrative authority shall render the

original approval null and void and therefore if a system was installed that did not match the approved plans or approved modified plans, then a new application is required and a septic system designer, who is required to be a licensed New Jersey professional engineer, is also required. If records of prior approvals cannot be located, the system that exists in the ground would be relied upon for establishing what is a repair versus an alteration. Regarding the final installed location of the components, if an administrative authority has issued a certificate of compliance for a system based upon as-built conditions pursuant to N.J.A.C. 7:9A-3.13, then those locations should be used.

63. COMMENT: N.J.A.C. 7:9A-3.3(d)1 is restrictive and paramount to a guarantee by the septic system designer. One cannot predict future non-compliance, there are too many variables that go to the use of the septic system, particular to the occupants of the house who can change over time. (27)

RESPONSE: The requirement is taken from N.J.A.C. 7:9A-3.3(e) prior to the adoption of these amendments where it applied to alterations. It is now expanded to include repairs to correct existing, malfunctioning conditions. The Department disagrees that this certification implies a guarantee of the future functioning of the system. As indicated at N.J.A.C. 7:9A-3.3(d)1, the system needs to be properly operated and maintained. Further, material defects that are beyond the responsibility of the septic system designer may also result in the malfunction of a system. It is the responsibility of the septic system designer to provide the necessary calculations and evaluations based upon the Chapter's volume and quality of wastewater assumptions. If a

property owner, in the future, exceeds the capacity of the Chapter's criteria that would be the property owner's responsibility as the operator of that system.

However, if a design flaw is identified that results in a malfunction, the designer should be held responsible for the malfunction. For example, installation of a check valve in a pressure dosing system where the delivery line is inadequately buried or otherwise insulated from freezing may result in cracked pipes. A resulting uneven distribution of effluent to or within the disposal field is a clear failure due to the design. Conversely, malfunction due to excessive biomat formation from the installation of a garbage grinder which was not accounted for in the design or failure to have the septic tank properly pumped are examples of a failure to properly operate and/or maintain the system.

64. COMMENT: For all intents and purposes, N.J.A.C. 7:9A-3.3(d)1 and 2i. require that the design engineer certify that the altered or repaired system will not fail in the future. This is an unreasonable expectation on behalf of the Department and creates unreasonable expectations on behalf of the public. It also creates an additional liability issue for the design professional. In its discussion of the economic impact of the rules and proposed changes, the Department recognizes that septic systems have a life span. Creating an obligation on the designer that they design a system that will never fail again is unreasonable, illogical and inconsistent with the Department's own findings. Engineers do their best to design systems that will function; however, they have no control over the use or maintenance of the system and therefore cannot make any representation that the system will function in the future. (8)

RESPONSE: N.J.A.C. 7:9A-3.3(d)1 specifies that the repair will correct the malfunctioning condition provided that the system is properly operated and maintained and therefore acknowledges the commenter's specific concern. Proper maintenance of all systems regulated under this chapter is further reinforced by the introduction of specific requirements to maintain systems in N.J.A.C. 7:9A-12.2. The purpose of the requirement is to ensure that engineered repairs address the cause of a malfunction, not the symptoms of a malfunction. For example, if a disposal area exhibits ponding of effluent on the ground surface and the septic system designer designs a new replacement bed meeting current standards to resolve the problem, the septic system designer would be in violation of the rule if the ponding was due to oversaturation of a disposal bed due to ground water seeping into a non-watertight septic or pump tank. It is the responsibility of industry professionals to fully evaluate malfunctioning systems prior to determining the appropriate solution to resolve the malfunction.

65. COMMENT: N.J.A.C. 7:9A-3.3(d)1 and 2i make the septic system designer responsible for certifying that a repaired or altered septic will not fail in the future. In today's litigious society that gives an unreasonable expectation to the end user and unrealistic liability on the septic system designer. The light of the fact that all septic systems have a lifespan that can vary upon a host of factors, the septic system designer cannot make any representation on how long a septic system might function in the future. (29)

RESPONSE: The rules do not imply any guarantee of the future functioning of the system or the longevity of the system, except with respect to the proper engineering of the system. The rules

specifically require proper operation and maintenance of a system to ensure that systems continue to operate as designed in Subchapter 12. However, if an engineer used inadequate or improper methods in their calculations, they would not be in compliance with the rules. The Department has seen many examples of engineering design mistakes that have lead to the continued malfunction of systems including, but not limited to, failure to evaluate wastewater quality and/or quantity entering the system, check valves in dosing systems that are not properly designed for frost protection, poor or improper soil evaluations, and sizing disposal fields so small they fail to meet any reasonable standard. The purpose of the requirement is to ensure that altered systems are designed to meet engineering standards, not to an "it is all that will fit" standard, based on site limitations. If a properly engineered system cannot fit on a currently developed site, a holding tank meeting the requirements of N.J.A.C.7:9A-3.12 would be appropriate as the last and least desired option.

66. COMMENT: N.J.A.C. 7:9A-3.3(d)2 does not appear to be written correctly. Instead of reading “If the disposal field requires a repair due to a malfunction, the information in (d)2i and ii below shall also be provided to the administrative authority”, it should read “If the disposal area requires repair due to a malfunction, then a septic system designer is required and the information contained in (d)2i and ii below shall also be provided to the administrative authority.” Further, subparagraph (d)2i(1) requires the design engineer to certify that “The repaired disposal field will be adequate to treat and dispose of the estimated volume of sanitary sewage and the type of waste generated”. Does this mean that without this certification, the administrative authority cannot issue a repair permit? What happens when a design engineer is not willing to make such a statement of adequacy? (19)

RESPONSE: The term "disposal area" is not defined by the rule. Accordingly, the commenter's suggestion that that term be used would require the Department proposing a definition for that term. However, "disposal field" is defined and is the appropriate term. Because the information in N.J.A.C. 7:9A-3.3(d)2i is already required to be submitted by a septic system designer, if the information is not submitted with the application, a repair permit should not be issued by the administrative authority. Further, if the information in N.J.A.C. 7:9A-3.3(d)2i is not submitted with the application, a repair permit should not be issued by the administrative authority. A certificate of compliance must not be completed for the system until all information is filed with the administrative authority, including plans required by N.J.A.C. 7:9A-3.3(d)2ii.

67. COMMENT: Does N.J.A.C. 7:9A-3.3(d)2 mean that the replacement of a distribution box, or a clogged pipe in the disposal field requires an engineer? Does it mean that the stone cannot be replaced without an engineering plan even if the surrounding soil is not being disturbed? (19)

RESPONSE: Requirements regarding distribution boxes are addressed in N.J.A.C. 7:9A-9. A distribution box is considered part of the effluent distribution network since those devices immediately precede the disposal field. The Department would not require the use of a septic system designer for an "in-kind" replacement of that component, provided that repair was done in a manner consistent with the current definition of "repair". The replacement of stone within a disposal field, regardless of the disturbance of surrounding soil, would require an engineer to certify the repair in accordance with this section, unless the stone is only that stone within the

disposal field associated with the distribution box. The requirement for an engineer for all disposal area repairs is necessitated by a number of factors. Environmentally, the disposal field is the component that is intended to have the greatest impact and must be properly designed and installed to minimize those impacts. The Department has been witness to and many health departments have reported that many repairs that were permitted were actually alterations where non-engineers took liberties to expand the amount of stone at the perimeter or in terms of depth to a disposal field, creating unsound situations. Further, the disposal field is also the single most expensive component of an onsite system and making sure these components are properly engineered is necessary to protect property owner's investments not only to ensure they do not malfunction, but also that they do not negatively impact neighboring property owners.

68. COMMENT: N.J.A.C. 7:9A- 3.3(d)2i(2) requires the engineer to certify that, "If there is a malfunctioning condition, the repair will correct the malfunctioning condition." Since it is not always possible to identify the exact cause of a malfunction, it is not reasonable to require an engineer's certification that "the repair will correct the malfunctioning condition." Although the commenter understands that is the goal, such a certification is unrealistic. There are cases when the best feasible repair is indeed undertaken, but only time and use will confirm that the condition has been remedied. To the other end of the spectrum, there are sufficient documented cases where the entire disposal field has been replaced, yet the system continued to malfunction. Any certification cannot be as all-encompassing as "the repair will correct the malfunctioning condition", particularly in those situations when the cause of malfunction is not specifically identifiable. To portray otherwise is not appropriate. This requirement should either be removed or reworded to allow for cases when the cause of malfunction cannot be pinpointed. (18)

RESPONSE: The septic system designer must evaluate the cause of the malfunction of the disposal field. If the cause of the malfunction can be corrected by a repair, then certifying to that fact is not unreasonable. If the septic system designer cannot readily identify that a repair will address the cause of the malfunction of the disposal field, then an alteration to the system is necessary. Alterations to systems would then be subject to N.J.A.C. 7:9A-3.3(e).

69. COMMENT: Consider the following example: a malfunction has been determined to be a cracked distribution box. The installer proposed a different location for the new box. There is no expansion or change of use in the dwelling. The system's other components are determined to be functioning. They met code prior to 1990, but are undersized per current code. According to this proposal, we read that the new location of the replacement box constitutes an alteration and, as such, under N.J.A.C. 7:9A- 3.3(d)2i, the functioning septic tank and functioning disposal field would have to be replaced to meet current code. In such an example (the remaining components are functioning), this is an excessive, unnecessary requirement. It is requested that the stipulation to "bring the system into conformance with this chapter" be removed or that the wording in subparagraph (e)2ii of "not possible to bring the system into conformance" be amended to allow for "fixing only what is broken." (18)

RESPONSE: A distribution box is technically considered part of the effluent distribution network, addressed in Subchapter 9. Since those devices immediately precede the disposal field, the Department would not require the use of a septic system designer for an "in-kind"

replacement of that component, provided that repair was done in a manner consistent with the definition of "repair." Changing the location of the distribution box might impact how the proposed work is permitted. If any corresponding change to the disposal field is necessary to relocate that distribution box, a septic system designer would need to be involved to certify those changes to the disposal field and may require alterations to the system, which would require substantial upgrade to the system as described by the commenter.

70. COMMENT: The final as-built with regards to the location of the system to property lines, etc. can only be done by a licensed professional land surveyor. (27)

RESPONSE: The Department defers to the Board of Professional Engineers and Licensed Surveyors for matters pertaining to the N.J.A.C. 13:40 requirements for professional engineers and licensed surveyors.

71. COMMENT: How does the administrative authority “assure that … the system design will not cause future malfunction”? What happens if in the future the system does start to fail; does this mean that the administrative authority was in violation of this section when it approved the design? What does “in the future” mean? One year, five years, 20 years? Under N.J.A.C. 7:9A-3.3(e)1 and 2ii., what criteria does the administrative authority use to determine if the “system as improved results in a discharge that is protective of human health and the environment”? (19)

RESPONSE: The Department acknowledges that traditional septic systems have a limited life span, approximately 25 years on average for a typical septic system that is properly operated and maintained. Systems incorporating advanced wastewater pretreatment can last much longer when properly operated and maintained. However, as N.J.A.C. 7:9A-3.3 describes, if an existing, malfunctioning system needs to be altered to correct a malfunctioning condition, the alteration must address the reason for the malfunction. This provision reinforces the need of administrative authorities to require property owners to properly identify the reason for the malfunction and then identify an appropriate way to address the problem, not to the details of construction and engineering of an altered system or the proper operation and maintenance of that system. For example, if a disposal field malfunctions due to stormwater or groundwater infiltration into a septic tank which overloads the disposal field, simply replacing or constructing a larger disposal area does not address the reason for the malfunctioning condition. N.J.A.C. 7:9A-3.3(e)2i identifies the need for proper operation and maintenance of the system, which is beyond the control of an administrative authority.

72. COMMENT: How does the administrative authority determine if there is an improvement? Does the administrative authority have to list all the factors that it believes makes the alteration an improvement? What happens if an adjacent property owner disagrees with the alteration and does not think there will be an improvement? What criteria are used to evaluate this? (19)

RESPONSE: There are many types of criteria that the administrative authority can use to determine if a system as improved results in a discharge that is protective of human health and

the environment. It would be impossible to cover every possibility. However, simple ways to demonstrate there is an “improvement” typically involve an evaluation of an existing condition and improving that condition. For example, in older, existing situations, setback distances to wells often cannot be met. If an existing seepage pit is 30 feet from a well and a new disposal field can be located 45 feet from the well, that is an improvement that is more protective of human health than what previously existed. While not required, as indicated by the commenter, an administrative authority could include in its permit the factors the authority believes makes the proposed alteration appropriate. However, in most cases these reasons will be obvious (for example, increasing separation distances between the level of infiltration and a regional high water table, increasing septic tank capacity, providing advanced wastewater pretreatment, etc.). But if there is ever a question, the Department has made and will continue to make itself available to provide assistance to administrative authorities in making these evaluations. If a neighboring property owner or other third party has a valid, technical issue with regard to a proposed alteration, the Department would anticipate the administrative authority would take reasonable measures to evaluate the concern prior to approving an alteration and work with all parties to determine how that concern could be reasonably resolved.

73. COMMENT: In recognition of current practice and the rule’s intent, the word “Any” should be preceded in the last sentence of N.J.A.C. 7:9A-3.3(e) by the following: “Except for de minimis changes in component materials or exact component location…" (25)

RESPONSE: The proposed language would leave too much to interpretation as to what is considered de minimis and, therefore, the rule language is not being revised upon adoption. However, depending on the circumstances, administrative authorities have the ability to deem a proposed repair consistent with the current definition.

74. COMMENT: Requiring that owners of holding tanks provide documentation to the administrative authority is unnecessary and the practical reality is that this information simply will not be submitted. It is not important to the homeowners and therefore will not be done. The administrative authority is then burdened with the administrative and enforcement tasks of following up with any holding tank owners on a periodic basis. It is very obvious when holding tanks are not working since the effluent will back into the house. The property owner has a strong vested interest in pumping the holding tank and adding reporting requirements is an unnecessary burden for the homeowner and the administrative authority. It provides little value since the amount of effluent that is discharged into the tank or pumped out is irrelevant. It will all be disposed of off-site. (8)

RESPONSE: The accurate tracking of the proper disposal of sewerage from holding tanks is important and should not pose significant difficulties. The Department has seen different ways of implementing such a program in various jurisdictions and could provided guidance to any administrative authorities that may experience difficulties in achieving compliance. The simple assumption that all materials must be disposed of off-site is not always accurate. Illegal pumping of tanks and disposal of wastes improperly is a significant issue. Illegal pumping the tank into a

local drainage ditch, low lying area or directly to water courses to avoid the cost of legal disposal has been identified in a number of cases and must be avoided at all costs. By tracking this data, health departments can prevent those types of problems.

N.J.A.C. 7:9A-3.4 Noncompliant systems

75. COMMENT: No change is proposed to N.J.A.C. 7:9A-3.4(a)1. In order to determine if surface water is being contaminated by sewerage or effluent, testing needs to be done. Fecal coliform to fecal streptococci ratio is not accepted by "Standard Methods" for testing water samples and therefore laboratories do not perform this test. A new test should be researched and proposed for these situations. Recommendations include multiple methods, which can include: "Coliphage, Antibiotic Resistance, Optical Brighteners, and Conventional Microbial indicators" (recommendations taken from a DEP, Southern Water Enforcement memo by Eric Feerst to Edward Post). (7)

RESPONSE: The Department agrees with the commenter that the testing method could be improved. The Department has initiated research into developing a replacement criterion to address this issue.

76. COMMENT: N.J.A.C. 7:9A-3.4(b)6 states that a zone of treatment must be present below a septic system to be compliant. With the proposed regulations, during a realty transfer the

administrative authority will need to have soils data that reflects that there is no evidence of regional groundwater or excessively coarse horizons within four feet of the bottom of the disposal field to conclude a septic system is compliant. Therefore, either a soil log will need to be done to supplement any inspection report he or she reviews or a log will need to be on record in the administrative authority's files. If a soil log needs to be done, the administrative authority will need to witness it and confirm the accuracy of the test result, thereby adding additional cost and time to the realty transfer process. This requirement also would effectively require many of the septic systems that were designed prior to 1990 to be replaced. (28)

RESPONSE: These rules do not require septic system inspectors to be soil evaluators. It is for this reason that, among other things, the evaluation of the presence of an adequate zone of treatment under a disposal field is not included in Appendicies E or F. The criteria in N.J.A.C. 7:9A-3.4(b) are for administrative authorities to declare a system malfunctioning and while many of the criteria appear in Appendicies E and F, any condition that would represent a situation where there is not an adequate zone of treatment requires a septic system inspector to identify a concern that would require expertise beyond the responsibilities of a septic system inspector, such as a professional engineer or soil scientist. It is the responsibility of the septic system inspector to evaluate the current functioning of the installed components of a system, regardless of the age of the system and under what Standards, if any, that system was designed or constructed. This does not include an evaluation of existing soils or groundwater conditions. Therefore, this issue should not impact property transfers as described by the commenter. However, if a septic system inspector observed standing water in a disposal area, they should label it as a "concern" or as a "high water condition" as described in Appendix E, 9(c) that there

is a condition that needs further investigation. The administrative authority should not be involved in the real property transfer beyond the issuance of any permits required to make any corrections to the system or respond to reports of potential non-compliances as they do to any other reports of non-compliance, and direct that corrective measures be implemented and permitted through its offices. They should not be an intermediary between parties in a real property transfer. While many administrative authorities choose to witness all soil evaluations, many also waive this requirement, as allowed in accordance with N.J.A.C. 7:9A-3.6, in cases where there is a potential malfunction that needs to be investigated.

77. COMMENT: Does the paragraph at N.J.A.C. 7:9A-3.4(b)6 apply to any septic system that was installed prior to 1990? (27)

RESPONSE: Yes. The requirement for an adequate zone of treatment has been required by State law since 1954 (P.L. 1954, c. 199) and subsequently was incorporated into the rules. This condition is required for cesspools, seepage pits and disposal fields (including both disposal beds and trenches).

78. COMMENT: Most existing cesspools and seepage pits do not have a zone of treatment. How and when are administrative authorities to make this determination? It would seem that only a complaint would trigger such an investigation, but if there is no malfunction during the investigation how can an administrative authority direct the owner to spend the money to hire an engineer and soil borer to determine the seasonal high water table (SHWT) even if it suspects a

lack of a zone of treatment? Please explain in detail how the administrative authority is supposed to determine that there is “Any discharge of sanitary sewage without a zone of treatment”. This information is usually not readily available for an existing system without using a backhoe. Older systems installed in areas where the seasonal high water table is above five feet would not generally be able to meet this test, even though the system may not show any other indications of malfunction. (7)

RESPONSE: The Department agrees that N.J.A.C. 7:9A-3.4(b)6 would cover most cesspools, which must be functional in order to remain in use, as long as there is no real property transfer or the transfer is exempt, in accordance with N.J.A.C. 7:9A-3.16. Many older seepage pits would also fall under this category. Directly discharging untreated sewage to the water table is never an acceptable form of sewage disposal. Regarding seepage pits, as discussed previously, laws and rules regarding the proper construction of seepage pits have required at least two feet of unsaturated soil beneath those units since 1954. Considering the average life expectancy of a septic system of approximately 25 years, over 50 years of discharging sewage receiving only primary treatment in a septic tank directly to the water table is no longer acceptable and the septic system should therefore be upgraded. More likely, the Department anticipates problems with systems installed after 1954 that were not properly sited or constructed originally. In every case, the inadequate disposal of wastewater before treatment to acceptable levels should not be tolerated. In addition, the State Sanitary Code requires that this be addressed. Regardless of current or previous ownership, responsibility lies with the current operator discharging to the system; enforcement must be guided accordingly. Therefore, if an administrative authority determines, as suggested above, a malfunctioning condition exists, it is the responsibility of the

property owner to resolve the non-compliance through correcting the malfunctioning criteria or investigating the matter to justify the existing system's functionality.

The Department does not anticipate administrative authorities will actively seek out potential violators of this provision, but rather use this requirement as a tool when reports of system problems are brought to their attention. There may be occasions where a backhoe might be the appropriate tool to make this determination, especially when dealing with beds or trenches where it is unclear by other methods if water levels are due to a high water table or evidence of excessive biomat formation in a disposal field. However, the Department expects that it is more likely that this determination will be empirically derived, through the observation of water levels in old seepage pits and where regional groundwater is observable (for example, there are nearby wetlands or surface waters at similar elevations as the water in the pit); and through knowledge of neighboring sites where ground water has been observed or through literature, such as Soil Survey data from the United States Department of Agriculture. Once that observation has been made, the administrative authority should direct the property owner to institute corrective measures, which would typically include requiring further evaluation of the system by an appropriate professional to investigate subsurface conditions.

79. COMMENT: What does the Department mean by “without a zone of treatment” at N.J.A.C. 7:9A-3.4(b)6? Due to existing conditions, many alterations can only be designed with a two foot unsaturated zone of treatment. Some lots are in a NJDEP Flood Hazard/ Flood Prone Area and due to limitations on the ability to place fill in these areas, the unsaturated zone may be less than

two feet. What is the Department's position on these reduced zones of treatment? Do these reduced zones of treatment violate N.J.A.C. 7:9A-3.4(b)6? (19)

RESPONSE: For seepage pit systems designed prior to 1990, a two foot zone of treatment was allowable by rule and would be considered adequate for the purposes of maintaining compliance for those older systems. Further, although all disposal beds and trenches have, since 1954, required a four foot zone of treatment by New Jersey law or regulation, the United States Environmental Protection Agency has issued guidelines starting in 1980, requiring a minimum of two feet of unsaturated material below any disposal area for the purposes of sewage disposal. For traditional septic systems, this would be considered adequate by the Department. For systems designed with an advanced wastewater pretreatment device, a minimum of 18 inches is considered adequate in accordance with N.J.A.C. 7:9A-10.8(d)5. Alternatively, if an administrative authority is presented with materials to document the adequacy of an alternative justification for an adequate zone of treatment, the Department would encourage that authority to contact the Department to review that justification.

80. COMMENT: What happens when years after the fact the administrative authority discovers that a property has added a bedroom(s) and the original owner is long gone and it can't be determined who did the renovation? What does an administrative authority do with a property that was approved with a waterless toilet and gray water system that is now using a conventional toilet with the system that was required by a Pinelands approval? They are now non-complaint with the permit. Do they need an advanced system to bring them up to current Pinelands

standards? It is hard to cite the current owner if no malfunction is observed and the administrative authority makes him or her have to hire an engineer and install a new septic system in accordance with this code change. (7)

RESPONSE: If a system is not being used in a manner consistent with the administrative authority's approval, the Department would suggest that an administrative authority work with the Pinelands Commission and take enforcement action if necessary to compel compliance with that prior approval or current rule. The Department defers to the Pinelands Commission for guidance on actions necessary to meet its standards if a violation of its approval has occurred.

81. COMMENT: Proposed N.J.A.C. 7:9A-3.4(c) includes a reporting requirement that subjects the current homeowner to self report if they found out they have a system that might be working but noncompliant. Self policing works in industry for spills, for example, via fines if the spill is not reported. A reasonable person cannot expect this from a homeowner when the system is not failing as one could easily assume that a "working system must be per se a compliant one" since most homeowners do not know the difference between a cesspool a seepage pit. This might also create unnecessary work for inspectors to investigate only to find out that what a lay person (homeowner) called a cesspool was, upon inspection, a seepage pit for the downspouts. (11)

RESPONSE: The Department acknowledges the commenter’s concern, however the referenced criterion is an existing requirement that has only been moved from N.J.A.C. 7:9A-3.4(b)1. The Department further acknowledges that most homeowners do not understand their systems, nor

are they familiar with their regulatory obligations. Information is available on the Department's website and administrative authorities are obligated under N.J.A.C. 7:9A-3.14 to inform system owners how they should properly operate and maintain those systems. The Department believes that this information provides sufficient notice to system operators of the importance of proper operation and maintenance and their responsibility to properly care for their system.

82. COMMENT: N.J.A.C. 7:9A-3.4(d) says that only the administrative authority can determine that a system is non-compliant. However, there are previous sections of the rules that require that a designer certify a system is "not malfunctioning" (see N.J.A.C. 7:9A-3.3(b)2, for example). If a designer can certify that a system is "not malfunctioning," that seems to be the same conclusion that the system is non-compliant. Requiring that the administrative authority be the only agency able to determine if a system is complying or not is an unreasonable expansion of the duties of the administrative authority. The administrative authority routinely reviews applications, soils data, etc. However, they are not engineers. Requiring the administrative authority to, in effect, certify that systems are acceptable for real estate transfers places them directly in the line of an enormous amount of litigation. With the proposed role of the administrative authority acting as the responsible party for deciding malfunctioning versus functioning, and compliant versus non-compliant brings a degree of professional responsibility and liability that lies in the septic system designer's domain. In addition, where a septic system is being evaluated during a realty transfer, there can often be multiple inspections of a septic system where the buyer and seller's professionals report varying results. If they determine a system is non-compliant, this may lead to a dispute with the seller. If they determine a system is compliant, and it fails in the future, it is very likely the owner will come back to the

administrative authority looking for relief. It seems a conflict of interest to have the administrative authority certify a system as compliant and then be responsible for the review of the system in the event of a future failure. Conversely, it seems to be a conflict for the administrative authority to "fail" systems since doing so clearly increases the "business" for the administrative authority. The current system relies on engineers to do these inspection and certifications and it should remain that way. Will mortgage companies accept a "certification" of a septic system from someone who is not a professional engineer carrying the appropriate professional liability insurance to back up the claim? The entire process of interjecting a public agency into private realty transfers in this case is misguided. There will certainly be higher costs and liability exposure for administrative authorities and municipalities if they have this burden. Dismissing the costs associated with this as was done in the Department's analysis of the rules simply ignores reality. (8, 12, 28)

RESPONSE: The Department is clarifying the language in N.J.A.C. 7:9A-3.3(b)2 to specify that the engineer identify that there is no observed condition that exists that is representative of a non-compliance including any of the malfunction criteria listed in N.J.A.C. 7:9A-3.4(b). These clarifications are supported by the proposal at 43 N.J.R. 487 and 509 that describe that only the administrative authority or the Department may make the determination officially that a system is "malfunctioning" and that the language proposed at N.J.A.C. 7:9A-3.3 conflicts with that concept. However, the formal regulatory designation of noncompliance, failure or malfunction has always been at the responsibility of the administrative authority or its authorized agent. Consistent with N.J.A.C. 7:9A-12.6 and Appendicies E and F, septic system inspectors during real property transfers should examine systems and determine their level of appropriateness

using terms such as satisfactory, satisfactory with concerns or unsatisfactory at the time of their observations. Further, the Department is not interjecting any public agency into private realty transfers. As identified in the rule proposal at 43 N.J.R. 487, the improper use of those regulatory terms has led to this historical confusion. The inspection at time of real property transfer is to provide property owners and potential purchasers with information to negotiate a transfer. Labeling a system "malfunctioning" or "failing" implies a required regulatory response and often results in those parties using the administrative authority, inappropriately, as an intermediary. The rule now clarifies that if an unsatisfactory condition is observed that indicates a potential malfunction, the parties can still negotiate their transfer, while the administrative authority separately responds to those reports of malfunctioning or otherwise noncompliant systems. If there is a discrepancy between the evaluations of the various parties' inspectors, which should not be the case if the protocol in N.J.A.C. 7:9A-12.6 is used by all inspectors, then it is up to those parties to decide on whether to proceed with the property transfer or not.

83. COMMENT: N.J.A.C. 7:9A-3.4(e)3 states, "… the administrative authority may permit continued occupation of the building served…" The administrative authority (health departments) does not evict occupants. Please provide law or rule that gives local health departments authority to order occupants to vacate a property. (7)

RESPONSE: New Jersey courts have held that if conditions at a property create a public health and safety emergency, the local health department has the legal authority to order occupants to vacate a property. For example, a municipality may take action to remove occupants from a

property when it is in the interest of public health and safety to do so and there is an emergency that necessitates such an action. Ajamian v. North Bergen, 103 N.J. Super. 61 (Law Div. 1968), *aff'd* 107 N.J. Super. 175 (App. Div. 1969), cert. den. 398 U.S. 952, 90 S. Ct. 1873, 26 L.Ed. 2d 292 (1970). The court reasoned that North Bergen had the authority to vacate the building under N.J.S.A. 26:3-46, -47, -49, and 50 (Id. at p.72), which are the statutory provisions providing local boards of health authority to abate a nuisance under certain circumstances.

84. COMMENT: When does the "10 day clock" identified in N.J.A.C. 7:9A-3.4(f) turn on? After receipt of the first inspection result or after subsequent inspection results? The Department should disengage and remove regulations that attempt to intertwine it with the realty transfer business. The current procedure which engages the administrative authority when a malfunctioning septic system is uncovered during the course of a realty transfer has been time tested and works well. Over the course of the last 25 years, literally thousands of septic systems have been brought into either full compliance or at a minimum, substantial compliance with the current code. (28)

RESPONSE: The 10 day clock begins to run when the administrative authority receives a report of noncompliance. However, this is true regardless of how the report is received (such as a real property transfer report or a call by neighbor). The administrative authority should not be an intermediary between parties during a real property transfer, although this often becomes the case when parties hire separate inspectors with differing opinions. Rather, the administrative authority should only be issuing the proper permits for any necessary repairs or alterations to the

system or responding to reports of potential non-compliance issues, as is its regulatory responsibility. As discussed in Response to Comment 82, above; labeling a system "malfunctioning" or "failing" implies a required regulatory response and often results in those parties using the administrative authority, inappropriately, as an intermediary. The rule now clarifies that if an unsatisfactory condition is observed that indicates a potential malfunction, the parties can still negotiate the specific terms of their transfer, while the administrative authority has regulatory responsibility to respond to reports of malfunctioning or otherwise noncompliant systems in accordance with its standard operation protocols. The responsibility of the administrative authority is solely to ensure that systems that are noncompliant, as evidenced by various reports and its observations, are properly corrected. The Department believes this to be an improvement over the previous system by making it clear that government should be limited in its involvement in contractual issues between private parties.

85. COMMENT: The administrative authority is placed in the position of needing to make a determination on a system within 10 days. This time frame and the process to do so are problematic. Who reports what they think may be a noncompliant system? Who pays the administrative authority to investigate? In the case of a real estate transfer, presumably the buyer would do this. What if the administrative authority does not have adequate information to make the determination when the application is submitted? Can it be returned and a request for additional information provided? Does there need to be a checklist for the "application" for certification? Developing the process will be time consuming and expensive for the local municipality. If a disgruntled resident "reports" a non-compliant system on a neighbor's property, whose obligation is it to collect the necessary data and pay the administrative authority

to make the determination? Many administrative authority actions are done in conjunction with an action by the local Board of Health, most of which only meet once per month. For all the reasons above, placing the burden of certifying the functioning of septic systems on the administrative authority is well intentioned, but misguided. (8, 12)

RESPONSE: The need to respond to the report of an observation of a non-compliant condition does not require the administrative authority to render a decision. The requirement to respond to reports of noncompliant conditions is no different than what the administrative authority would do upon receiving a telephone complaint of a noncompliance. Often in the case of inspections at the time of property transfer, property owners and their representatives, and property buyers and their representatives will negotiate the contractual issues related to correcting the system. The responsibilities that the administrative authority bears are to assure that any actual noncompliance is abated and that corrections to the system are done in accordance with the Standards. This rule does not speak to the situation where a disgruntled resident reports a non-compliant system on a neighbor's property or who is responsible to collect the necessary data and pay the administrative authority to make a determination. It is the Department's understanding that when an administrative authority receives a complaint that the administrative authority investigates that complaint and determines if it merits any further action. The Department does not anticipate that will change as a result of the adopted amendments. The rule amendments similarly do not effect any change in responsibility for developing information or how the administrative authority charges for its services.

86. COMMENT: The commenter agrees that the administrative authority should be notified of a malfunctioning/noncompliant system but believes that further training is needed of all parties who work in this field (such as training provided by the PSMA or its New Jersey equivalent). NJDEP needs to develop an educational, testing and licensing program for septic inspectors. The inspection of non-compliant systems is an additional cost in time and money for the administrative authority. This may be construed as an unfunded mandate. (7)

RESPONSE: The Department has prepared and issued guidance for inspecting systems dating back to 2003 and is available to assist administrative authorities in administering the Code. The Department does hold periodic meetings with administrative authorities, issues technical e-mail bulletins and training is available through Rutgers University and the New Jersey Environmental Health Association. The Department has traditionally helped educational institutions to develop programs when requested and would be willing to continue to work with administrative authorities to discuss particular issues as they come up or at regional meetings in the future. Please see the Response to Comment 9 regarding licensing of septic system inspectors. Further, as described in the rule proposal at 43 N.J.R. 511, with respect to the New Jersey Council on Local Mandates, in accordance with N.J.S.A. 52:2A-13H, the Department has not identified any potential unfunded mandate as part of this rulemaking. Since local boards of health recover costs associated with administering this chapter through the collection of fees for various permits issued by the administrative authorities, reliance on property tax increases to implement the program will not be necessary. If the administrative authority believes that it needs additional funding to implement its onsite wastewater management program then it should reassess its fees to its permitted facilities.

87. COMMENT: The Department states at N.J.A.C. 7:9A-3.4(h) that the installation of permanent holding tanks as the preferred method of wastewater disposal on existing sites which cannot meet the stringent criteria the Department is requiring in this rule proposal for existing homes. Due to the severe limitations that holding tanks place on both the property owner and the administrative authority, the use of holding tanks is not a practical solution to wastewater disposal except under the most extreme cases. The expense of pumping out every gallon of wastewater generated is not possible for almost every home or business owner. The administrative authority cannot possibly monitor if a holding tank is being pumped every few days to keep it from overflowing. The ability of the administrative authority to do the best they can in working with the design engineer, using all the experience and knowledge the administrative authority possesses, must be preserved in this proposed rule change. The language that is currently contained in this rule proposal makes it impossible for the administrative authority to do this. Instead, most alterations will be sent to the Department for review as the administrative authority will not be permitted by this code to issue a permit to alter or repair the existing system on the lot, unless the lot has no limiting factors and the stringent statements requiring the certification that 1) the system design will not cause future malfunction; 2) that the system as improved results in a discharge that is protective of human health and the environment; and 3) that the design engineer must certify that the repaired disposal field will be adequate to treat and dispose of the estimated volume of sanitary sewage and the type of waste generated. (19)

RESPONSE: N.J.A.C. 7:9A-3.4(h) does not express or imply that the Department prefers the use of holding tanks as evidenced by the phrase, "…as a last resort…". In addition, N,J.A.C. 7:9A-3.3 continues language that has existed in the Standards since 1990 with respect to allowing administrative authorities to approve of non-conforming systems where an existing system is malfunctioning. Each property owner that utilizes an individual subsurface sewage disposal system in New Jersey is responsible for ensuring their systems meet State requirements. Those owners whose properties cannot accommodate traditional or alternative treatment systems even with the flexibility the administrative authority has to approve corrections to malfunctions, will be, unfortunately, required to use holding tanks.

N.J.A.C. 7:9A-3.5 Permit to construct or alter

88. COMMENT: A specific exclusion to requiring a permit should exist at N.J.A.C. 7:9A-3.5, as well as the removal of any wording requiring a septic system designer when the only action being taken is the installation of a manhole to grade, as often suggested by pumping contractors after pumping. If anything, this should be a requirement upon the next time a system is pumped out as this is, in fact, an ultimate savings for the homeowner. Not only that, but it will spot the location of the septic tank on the property and make the homeowner more inclined to have the system maintained as the excavation of same has been done. (11)

RESPONSE: Permits are necessary for tracking what work was done to a system and who completes that work in case there is ever a question as to if that work was done properly. While

the Department agrees that extending manholes to grade does not constitute the practice of engineering and would not necessarily require an engineer to perform that work, improperly installed manholes to grade could result in a seal that is not watertight and cause the system to malfunction if excessive ground water entered, or stormwater flows infiltrated, the system. The administrative authority has the ability under N.J.A.C. 7:9A-3.3(e) to allow this type of alteration without requiring a septic system designer, at its discretion. If an administrative authority wishes to permit that type of alteration in a special category with its own associated fee or waived fee, that would be addressed by the administrative authority in question. However, the Department is not prepared at this time to require this of all existing system owners but will refer the matter to the Statutory Advisory Committee for future consideration.

89. COMMENT: Topographical information required under N.J.A.C. 7:9A-3.5(c)2 must be prepared by a licensed professional land surveyor – this should be stated in these regulations. Under the existing code the following needs to be changed.

ii. Boundaries of the lot must be prepared by a professional land surveyor

iv. Topography and setting a permanent benchmark must be prepared by a professional land surveyor

x. There are no more rules regarding “stream encroachment” which was changed under the flood plane management regulations N.J.A.C. 7:13. This reference needs to be adjusted. (27)

RESPONSE: See the Response to Comment 70 for issues regarding licensed professional surveyors. “Stream encroachment boundaries” at N.J.A.C. 7:9A-3.5(c)3x has been changed to

reflect the names of the boundaries under the Flood Hazard Area Control Act Rules (as indicated by the commenter, formerly known as the stream encroachment rules), N.J.A.C. 7:13. Particularly, the general term “stream encroachment boundaries” has been changed to “riparian zones, flood hazard areas and floodways,” to reflect the changes to the Flood Hazard Area Control Act Rules.

90. COMMENT: There should be a definition of “common plan of development,” which is a term used at N.J.A.C. 7:9A-3.5(c)2. The Department has expanded the applicability of this term to include all contiguous property in common ownership or development with common driveways. Both of these definitions are very broad and burdensome, but if this is the intent of the Department, it should be spelled out in the rules. (8, 28)

RESPONSE: A definition for "common plan of development or sale" was adopted into this chapter on January 5, 2009 and the existing definition of "property" was also changed at that time to incorporate the concept of a common plan of development or sale. (see 41 N.J.R. 142(a)).

91. COMMENT: The requirement for an expiration date on approved system plans at N.J.A.C. 7:9A- 3.5(e) is welcome. However, five years is an excessive time period. Site conditions may change during that time period (including those of adjacent properties), and new technologies and rules may impact the original design. It is recommended that plans be renewable based upon a site inspection by the administrative authority or the septic system designer for a period not to exceed two years. (15)

RESPONSE: The Department acknowledges the commenter's concern and will evaluate the effectiveness of this new requirement to include an expiration date in all permits. However, the rules do address at N.J.A.C.7:9A-3.7(c) the administrative authorities' ability to require changes to the design should actual site conditions change from what was originally noted on the plans. The Department proposed a five-year period for permits to be effective based upon, at the time of proposal, that State rules were typically effective for five years and NJPDES permitted facilities under the Underground Injection Control (UIC) program, which include septics as a Class V UIC, included a five year effective dates. A two-year effective time period, as the commenter suggests, would be consistent with how long TWAs are effective, however the Department feels that the five year time frame is more appropriate at this point in time to give permittees and administrative authorities the opportunity to adjust to issuing, obtaining and constructing systems under permits that now include expiration dates.

92. COMMENT: N.J.A.C. 7:9A- 3.5(e) requires the administrative authority to include an expiration date in every permit to construct, install or alter a system. The Department clearly articulates the basis for such permit expirations in the rule preamble. On the basis of the Department's articulation of the basis for such an expiration date, the writer recommends that the rule language be revised to clarify the Department's intention that administrative authorities impose a five-year expiration period on all permits issued prior to the adoption of the current amendments. The rationale for this requirement applies equally, if not more so, to legacy septic

system approvals which are often reflective of antiquated site assessment and design standards. (25)

RESPONSE: The Department acknowledges that systems that were approved in accordance with the rules after January 1, 1990 would still be valid. All approvals issued following the effective date of this rule will have a five year expiration. To extend a five year expiration to those existing approvals would be a substantive change upon adoption that would require separate rulemaking. Systems designed after January 1, 1990 should largely comply with the rule. However, the Department will consider establishing an expiration date for those existing approvals in future rulemaking. The Department agrees that prior approvals should not last indefinitely and plans to discuss this, and the potential for additional rulemaking on this issue, with the statutory Advisory Committee at a meeting prior to the end of 2012.

N.J.A.C. 7:9A-3.9 Treatment works approval

93. COMMENT: Is the entire section that currently exits at N.J.A.C. 7:9A- 3.9(a) to be replaced? (27)

RESPONSE: As indicated in the Summary of the proposal at 43 N.J.R. 489, the previous N.J.A.C. 7:9A-3.9, which consisted of subsections (a) through (c), is being repealed and replaced with new N.J.A.C. 7:9A-3.9(a) through (i). Under New Jersey Register publication format, if an

entire section is proposed for repeal, the text of the section proposed for repeal is not reproduced in the Register. Instead, a reference to the sections proposed for repeal and where rule text can be found in the Administrative Code is published in the Register at the beginning of the proposed rule text (see 43 N.J.R. 516). The bolded language in the proposal represents the new language of N.J.A.C. 7:9A-3.9

94. COMMENT: At N.J.A.C. 7:9A- 3.9(a)4, the Department is proposing to require that a Treatment Works Approval (TWA) be issued for wastewater treatment systems that utilize active treatment as a means to meet effluent quality limitations. In the past, the Department has worked closely with the Pinelands Commission in developing and issuing "generic TWAs" for those wastewater treatment technologies that are authorized for use in the Pinelands Area. In these instances, the Department issued TWAs, not because the systems were proposed to meet specific effluent quality limitations (although that is the underlying basis for their use), but instead because the systems are configured in a manner that does not strictly conform to the requirements of N.J.A.C 7:9A- 8.2 (a). The Pinelands Commission would like to confirm the Department's intention to continue to issue "generic TWAs" for new technologies that might be proposed for use in the Pinelands Area, pursuant to the Pinelands Commission's pilot program rule at N.J.A.C 7:50- 10.23 which authorizes the Pinelands Commission to introduce new technologies to the pilot program. (26)

RESPONSE: The Department's intent is to continue to work with the Pinelands Commission and issue modifications, when necessary, to the existing generic Treatment Works Approvals for technologies included in its Pilot Program.

95. COMMENT: The Department is proposing to require that a Treatment Works Approval (TWA) be issued for wastewater treatment systems that utilize active treatment as a means to meet effluent quality limitations. Recent amendments to the Pinelands Comprehensive Management Plan (CMP) (August 2010) have resulted in two advanced wastewater treatment technologies (Amphidrome and Bioclere) “graduating” from the Pinelands Alternate Design Treatment Systems Pilot Program. These technologies have been granted permanent approval status as a result of satisfactory performance in the Pinelands Commission’s pilot program. They are authorized for use in the Pinelands Area as a means to comply with Pinelands water quality standards as a result of active treatment. The Pinelands Commission wishes to confirm that the generic treatment works approval that the Department issued for these technologies will remain in place and that applicants proposing to use these technologies will not be subject to a separate TWA application and associated Department review and TWA permit fee. (26)

RESPONSE: The Department's intent is to continue to work with the Pinelands Commission and issue modifications to the existing generic Treatment Works Approvals for technologies included in its Pilot Program and those technologies that have successfully completed the Pilot Program. The generic treatment works approval that the Department issued for these technologies will remain in place, but the addition of new technologies to the pilot program will require

modification to that TWA. Individual projects under the pilot program will not be subject to a separate TWA application and associated Department review and TWA permit fee unless conformance with the generic TWA is not possible by the applicant.

96. COMMENT: The Department is proposing to require that a Treatment Works Approval (TWA) be issued for wastewater treatment systems that utilize active treatment as a means to meet effluent quality limitations. It is the commenter's understanding, based upon discussions with DEP staff, that the Department may also require the issuance of a NJPDES permits under certain circumstances to confirm that the proposed advanced treatment technologies are conforming to prescribed effluent limitations as a means of achieving conformance with water quality standards. The Pinelands Commission is supportive of the issuance of such NJPDES permits for commercial or other non-residential development, for which advanced wastewater treatment technology has been proposed as a means to achieve compliance with water quality standards, even where the estimated design flow from such development is less than 2,000 gpd. (26)

RESPONSE: The Department acknowledges the comment in support of this amendment.

97. COMMENT: Do the proposed changes to N.J.A.C. 7:9A-3.9 require systems, like those used in the Pinelands, which are not approvable under the chapter (such as those that do not have NSF International certification), to obtain a TWA? (4)

RESPONSE: Advanced wastewater pretreatment units that do not strictly conform to the requirements of this chapter would require an individual or generic (if applicable) TWA. As discussed above in the Response to Comment 95, systems used in the Pinelands pilot study are, and will continue to be, covered by a generic TWA.

98. COMMENT: Does an ejector pump in a building constitute a system that does not flow by gravity to the septic tank? If so, all later references to system design requirements for ejector pumps should be eliminated since all these systems would be under the review of the Department by means of a TWA. The commenters are aware of instances where a slop sink or bathroom in a basement occasionally is used in conjunction with a pump to lift waste product to a septic tank. For that matter, every washing machine pumps its waste to a sewer line. At a minimum, language needs to be placed in the proposed regulations as to what type of waste may be pumped to a septic tank and not require submission for a TWA to the Department. (8, 28)

RESPONSE: N.J.A.C. 7:9A-3.9(a)5 requires a TWA for any design in which sanitary sewage will not flow by gravity from the realty improvement to the septic tank. Ejector pumps in a building would only require a TWA if the entire building sewer is pressurized to the septic tank. This is not a typical design, as ejector pumps usually lift sewage to the building sewer, which then feeds the septic tank by gravity. Accordingly, the Department believes that further clarification is unnecessary. A TWA would also be required under this section for a system

which uses a pump tank outside of the structure in order to lift sewage to a septic tank for primary treatment.

99. COMMENT: The proposed rule would require that a TWA (or multiple TWAs) be issued by NJDEP as part of the water supply and sewerage facilities certification process of 50+ realty improvements required by N.J.S.A 58:11-25.1. The commenter seeks confirmation that the DEP will recognize the reduction in total nitrogen in treated effluent discharged by the advanced wastewater treatment systems authorized for use in the Pinelands Area through the Pinelands Alternate Design Treatment Systems Pilot Program. The commenter seeks confirmation that conformance with applicable water quality standards at N.J.A.C. 7:9C and 7:50 will be determined based upon total nitrogen effluent concentrations of 14 mg/l from advanced treatment technologies authorized through the Pinelands Alternate Design Treatment Systems Pilot Program versus total nitrogen effluent concentrations of 40 mg/l from conventional or traditional septic tank leach field systems (26)

RESPONSE: The Department will continue to recognize the reduction in total nitrogen in treated effluent discharged by the advanced wastewater treatment systems authorized for use in the Pinelands Area through the Pinelands Alternate Design Treatment Systems Pilot Program. Further, for those systems in the Pinelands Area, conformance with applicable water quality standards at N.J.A.C. 7:9C and 7:50 will continue to be determined based upon total nitrogen effluent concentrations of 14 mg/l from advanced treatment technologies authorized through the Pinelands Alternate Design Treatment Systems Pilot Program as opposed to total nitrogen

effluent concentrations of 40 mg/l from conventional or traditional septic tank leach field systems.

100. COMMENT: The proposed rule would require administrative authorities or their authorized agents to endorse every TWA application as being in conformance with all aspects of N.J.A.C 7:9A and any local ordinances, except for those aspects of the design that are subject to TWA review. The commenter is concerned that the Pinelands Alternate Design Treatment Systems Pilot Program would be subject to delays and increased costs associated with TWA permit fees from such a review as compared to the process followed for the existing generic TWA. The commenter requests that advanced treatment systems whose use is authorized through the Pinelands Alternate Design Treatment Systems Pilot Program continue to be authorized through the existing generic TWA or any future modification to the generic TWA, be relieved of a TWA permit fee and that certification of N.J.A.C 7:9A conformance by Pinelands Area administrative authorities be waived for systems that are proposed for use pursuant to the Pinelands Alternate Design Treatment Systems Pilot Program. (26)

RESPONSE: As indicated in the Response to Comment 95, individual projects under the Pinelands pilot program will not be subject to a separate TWA application and associated Department review and TWA permit fee unless conformance with the generic TWA is not possible by the applicant. For example, if a technology authorized under the Pilot Program is proposed to be used on a commercial property. Since generic Treatment Works Approvals do not require submission of individual applications to the Department, no additional review or

signoff is necessary by the local administrative authority. The generic TWA is issued by the Department and the local administrative authority can issue a final design approval if the system design complies with the requirements of the generic TWA. Accordingly, it is not necessary to waive this condition since it is not applicable to generic TWAs.

101. COMMENT: N.J.A.C. 7:9A-3.9(i) specifies what must be included in “final construction approvals" issued by administrative authorities after the Department issues a TWA. The commenter does not issue a final construction approval, but instead issues what is known as a Certificate of Compliance, which is not the same thing. Are deviations required to be cited on the Certificate of Compliance? Conditions that may be applied to the TWA permit can include long-term monitoring of the site, reviewing testing results, etc. An example would be a holding tank permit that would require maintaining pump out receipts and maintenance contracts. This follow-up is a time consuming and costly. Since these are DEP permit conditions, the follow-up should be DEP’s responsibility. This requirement constitutes an unfunded mandate. (7)

RESPONSE: A final construction approval is the document or approval issued by the administrative authority that approves the design and allows construction of a system to commence and for other agencies to issue any other required construction approvals for realty improvements. As indicated in the proposal Summary at 43 N.J.R. 490, this subsection is intended to address the administrative authority’s approval that allows construction of nonconforming system designs. Holding tank issues related to TWAs are addressed separately in the Response to Comment 74. In order to clarify this point, the Department is replacing the

phrase “final construction approval” with the phrase “final design approval.” A Certificate of Compliance is issued after the system is constructed and all inspections have been satisfied to ensure the system was properly constructed. The administrative authority issues permits for approving system designs in accordance with the requirements in a TWA when a variance from the Standards is approved by the Department. The Department does not typically require the conditions of a TWA be included in the Certificate of Compliance or otherwise stipulate how the administrative authority addresses TWA conditions. Many of the conditions that are included in TWAs do not require any incorporation or references in documentation issued by the administrative authority, but require that certain documentation, such as deed notices and certifications be received by the administrative authority prior to issuance of a final design approval. Other conditions could include proof of regular service contracts or tracking other maintenance activities. Administrative authorities that allow for variances from the requirements of the Code through TWA application to the Department can establish fees sufficient to allow for monitoring and other costs to assure that approval conditions are complied with and the system is operating as designed. As these fees are paid by the applicant for approval of the project, these costs to monitor compliance do not constitute an unfunded mandate.

N.J.A.C. 7:9A-3.12 Holding tanks

102. COMMENT: The approval process for holding tanks at N.J.A.C. 7:9A-3.12 seems to be circular. Some sections say that the administrative authority can approve them (see N.J.A.C. 7:9A-3.12(b)) while others say a TWA is required. If the administrative authority can approve a holding tank under N.J.A.C. 7:9A-3.12(b) (subject to the Department’s prior approval as noted in

N.J.A.C. 7:9A-3.4(h)), why is a TWA indicated as needed in N.J.A.C. 7:9A-3.12(c)? It seems the intent is to require Department approval of all holding tanks and it would be simpler if the requirement for Department approval was just clearly stated. If this is not the intent, the language must be clarified. (8, 12)

RESPONSE: An administrative authority can authorize the use of a holding tank without the Department's approval of a TWA, but only as a temporary means of waste disposal for a period not to exceed 180 days where an approved alteration or repair of an existing system is being implemented (see N.J.A.C. 7:9A-3.12(a)). If a permanent holding tank is necessary, the administrative authority can only approve that installation after the permanent holding tank has been approved through an individual TWA issued by the Department. The only written approval that the Department issues with regard to onsite systems is a TWA.

N.J.A.C. 7:9A-3.14 Notification of proper operation and maintenance practices

103. COMMENT: The current requirement at N.J.A.C. 7:9A-3.14 is that "…the administrative authority (is) to notify owner of … disposal systems of (the) proper operation and maintenance practices…" every three years. This section is, and will continue to be, cost prohibitive for an administrative authority. This constitutes an unfunded mandate. The rule should require relevant guidance material to be issued at time of installation only. Instead of mailing thousands of paper booklets to property owners, an alternative would be to allow health departments to place this information on a website. Homeowners could easily find this information at no cost to the health department. Many health departments already provide this information on-line. (7)

RESPONSE: Since property owners change over time and even long-term owners need be reminded of the significance of proper system operation and maintenance on human health and the environment, it is important that information is provided periodically to property owners to remind them of the importance of proper system operation and maintenance, and where information on proper operation and maintenance methods can be obtained. This information is usually disseminated in or with other materials distributed by the local governing agencies such as county newsletters, local garbage or recycling notices and other types of materials that are distributed that can be coordinated by the administrative authority. To the extent the administrative authority has the ability to distribute this information directly to property owners of systems through e-mail or other means on the frequency required by the rules the Department would consider this to meet the requirement. Provided this information is either sent to the property owner at least once every three years, or that notice is provided to the property owner as to the availability of system operation and maintenance information on the administrative authority's website once every three years the Department considers the obligation met. The requirement to provide this information has been part of the rules for approximately 30 years and with enhanced abilities to disseminate information electronically, these costs are further minimized. The Department believes that providing this information leads to reduced costs and environmental degradation by helping reduce the number of system failures created by improper operation and maintenance.

N.J.A.C. 7:9A-3.15 Records

104. COMMENT: The proposal at N.J.A.C. 7:9A- 3.15(a)6 creates reporting requirements without indicating precisely what needs to be reported. This is not reasonable and the impact of what needs to be reported cannot be evaluated. Until the Department has something in place that defines exactly what it is looking for, this section should be tabled for a subsequent revision to the regulations at a later date. It would be impossible for the Department to evaluate the financial impact of the report if it has not developed the requirements. (8, 12, 28)

RESPONSE: N.J.A.C. 7:9A-3.15(a) does not discuss any reporting requirements as indicated by the commenters. This provision discusses the recordkeeping requirements that administrative authorities must maintain. While reporting requirements are addressed in the rule at N.J.A.C. 7:9A-3.15(d), many of the requirements of N.J.A.C. 7:9A-3.15(a) will be useful in generating those reports. With reference to the information that is required to be reported, see the Response to Comment 105. The Department, accordingly is not removing these subsections from the rule or tabling these issues for later discussion.

105. COMMENT: N.J.A.C. 7:9A- 3.15(d) provides another reference to undefined reporting requirements. It is incomprehensible how the rules can be adopted until all the details are worked out. (8, 12)

RESPONSE: Administrative authorities and the Department have been working together to accomplish reporting of onsite system permitting information using the forms discussed at 43 N.J.R. 491 since 2003. Copies of these report forms and previous data submissions are on file

and available for public inspection. As indicated in the rule, the report must contain the following information: 1. the total number of systems known to be present in each municipality; 2. the types of inspections conducted on systems and the number of each type conducted; 3. the types of permits issued by the administrative authority and the number of each type issued; 4. the number, type and apparent cause of verified non-compliant systems; and 5. a description of areas known to have higher than normal rates of non-compliance. The Department believes that the rule language regarding what is to be reported is clear and is consistent with the types of information that administrative authorities have been maintaining and reporting since 2003.

106. COMMENT: Compulsory annual reports to DEP as required by N.J.A.C. 7:9A- 3.15(d) and 8.3(e)2 are onerous and superfluous for the administrative authorities. It is sufficient for the protection of public health that these data are on record with the administrative authorities. This requirement should be rescinded. (18)

RESPONSE: As described in the rule proposal at 43 N.J.R. 491, these reports will provide information to support the identification of and establishment of Critical Areas (Subchapter 13) to protect water quality in watersheds. The Department may also use the information to develop appropriate regulatory amendments and to respond to requests by various Federal and State agencies such as the United States Environmental Protection Agency and its Region II officials, and the New Jersey Office of Legislative Services, when legislative officials have questions regarding the program. The information obtained could also be utilized in evaluating the distribution of funds to municipalities from the Department’s State Revolving Fund Program.

The Department will continue to seek ways to further streamline the process and increase the effectiveness of electronic submittals and welcomes input from the administrative authorities as to specific ways to accomplish those goals while providing the required information.

107. COMMENT: Under N.J.A.C. 7:9A- 3.15(d)2, what inspections are supposed to be reported and who is supposed to have done these inspections? It is entirely possible that many inspections are done by homeowners or potential home buyers that are never reported to the administrative authorities. Holding the administrative authorities to a standard to try to report all these inspections is not reasonable. (8, 12)

RESPONSE: The administrative authority is expected to report those inspections that have been reported to that administrative authority pursuant to N.J.A.C. 7:9A-12.6 and those inspections conducted by the administrative authority on systems that have previously been in use.

N.J.A.C. 7:9A-3.16 Other sanitary sewage disposal units

108. COMMENT: The proposed changes at N.J.A.C. 7:9A-3.16 will place an undue financial hardship on New Jersey homeowners, especially senior citizens and low-income homeowners. The proposed requirement to prohibit the continued use of cesspools (even when they are satisfactory and not malfunctioning) seems irrational, and the State is playing fast and loose with homeowner's wallets. In a situation where a homeowner (especially an elderly or low income person) has an existing cesspool that is functioning and is satisfactory, and they go to sell their

home, they should not be required to finance an upgrade to a system. This is a $15,000 to $30,000 capital expenditure, when the existing cesspool already meets the needs of the homeowner. Where is the compassion? Where is the common sense? The government operates for the good of the people, not the other way around. This is very detrimental and a financial hardship to property owners in the State. My mother lived in the State almost her whole life, and, though she was a low-income senior, she paid the high property taxes faithfully. She is now deceased, and I am now the executor of her meager estate, the house I grew up in. I am charged with selling her small but cherished home, where I spent many happy golden years. It has a cesspool which is in satisfactory condition according to a recent inspection, and it is unreasonable to mandate that it be upgraded to a septic system until it is in need of repair. (6)

RESPONSE: A cesspool is not an acceptable means of sewage disposal in New Jersey. These units were banned from new construction over 30 years ago to prevent raw sewage from being directly discharged to the environment. The Department in 1978 instituted this ban and determined that phasing out these antiquated devices is appropriate. However, since initiation of the ban on use of these inadequate devices in new construction, the Department has allowed the continued use of current cesspools to limit the economic impact on cesspool owners, rather than require all cesspool owners to upgrade immediately. It should be noted that at that time, any correction (not limited to repair) to a cesspool required the upgrading of that cesspool, at a minimum, to a seepage pit system. These adopted amendments continue to allow the current owner of a cesspool to continue to utilize this disposal method as long as the cesspool is not in need of repair or alteration. While the Department has reduced immediate financial impacts on owners of these properties, this disposal method is simply not protective of human health and the

environment and cannot be allowed to continue indefinitely. The Department believes that transfer of a property to a new owner, with certain limited exceptions identified in N.J.A.C. 7:9A-3.16(c), is an appropriate trigger to require that the property discontinue use of the cesspool and instead be served by an appropriate, adequate and conforming sewerage utilty protective of human health and the environment. The Department acknowledges that the owner of a property served by a cesspool who seeks to sell the property will incur an expense related to the upgrading to a conforming system, as indicated at 43 N.J.R. 512 it is anticipated that in most, if not all cases, some portion of that expenditure will be recouped by increasing the value of the property and the number of potential buyers and lending institutuions that would be willing to participate in the sale of the property.

To accommodate transfers already in process, the Department is delaying the implementation of the requirement to upgrade cesspools at N.J.A.C. 7:9A-3.16(b) by 60 days to avoid complications with real property transfers that were scheduled prior to the promulgation of this rule. By providing 60 days, the Department provides sufficient time for those previously scheduled settlements to occur without causing significant impact to those transactions, while providing sufficient time for those transactions scheduled after those 60 days to address upgrading cesspools or other deficient sanitary sewage disposal units. The Department recognizes that the oppurtunity to upgrade those cesspools will be lost until subsequent corrections to that cesspool are necessary or a future real property transfer. However, this action should minimize any economic difficulty that might be encountered immediately after the rule is promulgated.

109. COMMENT: There is a typo at N.J.A.C. 7:9A 3.16(a). The word "be" should be added to the second sentence so that it reads "… it must order these units be abandoned…". (15)

RESPONSE: The Department has made this change as requested.

110. COMMENT: N.J.S.A. 58-11-23, better known as the "Realty Improvement Sewerage and Facilities Act" (RISF Act), governs sewerage facilities for realty improvements (that is, new construction). It also comes into effect when changes are made to a realty improvement that may affect an existing approved system (such as a change of use, additions, or alterations). The commenter does not believe the RISF Act empowers the NJDEP to make rules at N.J.A.C. 7:9A-3.16 that now affect properties that are only the subject of a transfer of title. Who is responsible during a real estate transaction to notify all parties, including the administrative authority, that a property is serviced by a cesspool and it must be abandoned? The NJDEP needs to amend the RISF Act to require inspection of all septic systems prior to the sale of real estate. These inspections should be done by a NJDEP licensed septic inspector. Only then can the rules proposed here be reasonably enforced. If it is the intention of the NJDEP to protect buyers of real estate from getting stuck with a malfunctioning system, change the law. (7)

RESPONSE: The Standards for Individual Subsurface Sewage Disposal Systems are adopted pursuant to a suite of statutory authorities that direct the Department to protect public health and the environment. As identified in the proposal header, in addition to the RISF, authority for the chapter is also derived from N.J.S.A. 13:1D-1 et seq.; 26:3A2-21 et seq., and 58:10A-1 et seq.,

including 58:10A-16. The New Jersey Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., finds and declares that, "pollution of the ground and surface waters of this State continues to endanger public health; to threaten fish and aquatic life, scenic and ecological values; and to limit the domestic, municipal, recreational, industrial, agricultural and other uses of water, even though a significant pollution abatement effort has been made in recent years. It is the policy of this State to restore, enhance and maintain the chemical, physical, and biological integrity of its waters, to protect public health, to safeguard fish and aquatic life and scenic and ecological values, and to enhance the domestic, municipal, recreational, industrial and other uses of water." As indicated in previous responses, including the Response to Comment 108, cesspools are not an acceptable means of sewage disposal because they are not protective of public health and the environment. These units were banned from new construction over 30 years ago to prevent raw sewage from being directly discharged to the environment. Elimination of these antiquated units to restore, enhance and maintain water quality in the State, and thereby protect human health and the environment, is clearly within the authority granted to the Department.

The current property owner is responsible to upgrade a cesspool at the time of property transfer. Pursuant to N.J.A.C. 7:9A-3.16(b), the requirement is for the units to be upgraded when the property is part of a real property transfer. 'The Department believes that those involved in real property transfers will be aware of the requirement based on previous stakeholder input and public notices

The changes being adopted at this time, including the requirement that cesspools be replaced upon transfer of the property, were developed over several years. This rule development included notice to and input from representatives of the Statutory Advisory Committee, which includes members representing the New Jersey Association of Real Estate

Boards, the New Jersey Builders Association, the New Jersey League of Municipalities and the New Jersey Institute of Municipal Attorneys. Notice of the proposed readoption with amendments was provided through the New Jersey Register, newspapers, the Department's website and direct e-mailings to the members of the Statutory Advisory Committee, health departments throughout the State and individuals throughout the State that have requested to be notified of program updates through the Department's voluntary registry. Comments received included comments from those involved in realty transfers. The Department will be reaching out directly to construction officials that issue Certificates of Occupancy, septic system inspectors, realtors and banking institutions to inform them of the adoption of these changes, including the requirement that cesspools be replaced in most all transfers of real property. The Department would anticipate administrative authorities will additionally notify those in the regulated industry that they have contact with to advise them of the requirement that cesspools be replaced, with limited exceptions, on transfer of a property containing one of these devices. For more information regarding the licensing of septic system inspectors, see the Response to Comment 9.

111. COMMENT: Is it expected that the administrative authority is to review all real estate transfers to ensure none is completed without the replacement of a cesspool or other noncompliant device? This is a virtually impossible task, especially if the property is in a rural area of the State with outbuildings such as barns that may have these antiquated systems. For example, there could be a barn on the fringes of a 200 acre property that has a privy. Is it expected that the administrative authority must interject itself in the realty transfer to ensure this is replaced with a complete system? Requiring the upgrading and replacement of cesspools prior to the transaction does not allow for the transfer of property where the seller has no financial

means to upgrade the system and the buyer intends to install a replacement when he takes title to the land. It also ignores the situation where a buyer intends to demolish the existing structure and build a new one with a new ISSDS. Why should the derelict building have a new system installed just so that it can be abandoned immediately after closing? (8, 12, 28)

RESPONSE: Only when the administrative authority is provided with inspection reports from a septic system inspector as the result of an inspection for a real property transaction or if the administrative authority is otherwise informed of a real property transfer involving a property served by a cesspool or other non-system would the administrative authority take action regarding the requirements of N.J.A.C.7:9A-3.16. With reference to the example provided regarding a barn, these structures are not typically structures that require sewerage facilities. However, if they wish to provide those structures with sewerage facilities, they must provide a system that complies with the Standards. As indicated in the proposal Summary at 43 N.J.R. 491, this provision prohibits use of cesspools after the transfer of a property, it does not require that upgrade of cesspools must occur prior to the transaction. Depending on the circumstances, such as the building demolition example provided, the cesspool could be properly abandoned before it is replaced with a conforming system as part of the demolition and new construction since it would fail to meet the requirements of N.J.A.C. 7:9A-3.3(b), as long as the cesspool is not used at all subsequent to the transfer. The Department encourages administrative authorities to coordinate with construction code officials working in their jurisdiction to ensure construction approvals and certificates of occupancy, including any applicable continuing certificate of occupancy, are not issued to properties that fail to properly upgrade cesspools. The Department

also intends to work with the Department of Community Affairs, the State agency that oversees construction officials, to advise construction officials of these changes.

112. COMMENT: N.J.A.C. 7:9A-3.16(c) must also include instances where there is no mortgage upon transfer, regardless of cost, as in that instance there would be no one requiring the inspection. (11)

RESPONSE: N.J.A.C. 7:9A-3.16(b) requires that cesspools and other devices be abandoned on transfer of the real property, subject to the limited exceptions provided in N.J.A.C. 7:9A-3.16(c), regardless of whether the cesspool or other device was subject to an inspection or the transfer of real property was secured with a mortgage or not.

113. COMMENT: Why are governmental agencies exempt from the required upgrades to cesspools, and other devices at N.J.A.C. 7:9A-3.16(c)2? If it is a significant enough of an environmental issue to burden a property owner, it should apply equally to government agencies. The ability of the “sovereign” to bypass its own rules is not good practice, especially when it comes to impacts on the environment. (8)

RESPONSE: With reference as to why the Department is not removing the exemption at N.J.A.C. 7:9A-3.16(c)2, see the Response to Comment 16. The Department is not deleting the exemption at N.J.A.C. 7:9A-3:16(c)2 since most of these facilities served by cesspools typically

receive larger volumes of wastewater or are on properties with aggregate volumes greater than 2,000 gallons per day; these cesspools were required to be upgraded on or before April 5, 2005 pursuant to N.J.A.C. 7:14A-8.3(a)3i. The Department also plans to discuss this, and the potential for additional rulemaking on this issue, with the statutory Advisory Committee at a meeting prior to the end of 2012.

N.J.A.C. 7:9A-3.17 System professionals

114. COMMENT: While the commenter understands the need to ensure those who are installing and servicing advanced wastewater pretreatment systems are qualified to do so, the concern remains of the additional costs this requirement would impose on small business owners who would be required to obtain the licenses specified in N.J.A.C. 7:9A-3.17(a) and (b), especially in an economic climate that is not expected to improve by 2012. (9)

RESPONSE: As indicated in the rule proposal at 43 N.J.R. 511-512, the potential impacts to human health and the environment associated with allowing unqualified individuals to install systems that they have not demonstrated the ability to install through a valid credentialing program for installers working with those technologies outweighs any additional costs. Currently, the Department recommends the use of nationally credentialed professionals when hiring individuals to install onsite systems since the State lacks its own program. This requirement furthers the goal of using properly credentialed professionals in the industry without establishing a new regulatory program in New Jersey. In order to allow a period of time after the effective date of the amendments for installers to obtain the necessary credentials, the

Department is amending the rule on adoption to delay the imposition of this requirement to January 1, 2013.

115. COMMENT: Given the critical nature, in many cases, of site evaluations, (for example, determining estimated seasonal high water table or zones of saturation), a category for professional soil scientists should be included in N.J.A.C. 7:9A-3.17. Examples of such qualified professionals are individuals with full membership in the New Jersey Association of Professional Soil Scientists (NJAPSS) or those holding a national Soil Scientist certification (formerly known as American Registry of Certified Professionals in Agronomy Crops and Soils or "ARCPACS", now under the Soil Science Society of America (SSSA)). If such limiting features of the soil profile are missed, the danger to the public is that a system can be designed in a soil profile that is actually a limited or even unsuitable location. Additionally, since the adoption of the Stormwater Mangement rules (N.J.A.C. 7:8) in 2004 that added requirements to recharge stormwater to groundwater, the underground effects of this recharge on the seasonal high water table and the subsequent impact on subsurface soils are even more pronounced. Understanding soil water movement is essential and soil scientists are qualified to assess this. To require that authorized installers must demonstrate necessary knowledge, yet not require a similar level of competence of site evaluators or soil scientists, is to bypass the importance of the soil in the successful function of a septic system. (18)

RESPONSE: The Department continues to recommend the use of credentialed individuals when evaluating soils, as well as any other appropriate credentials for performing other work related to

onsite systems. If a septic system designer is capable of performing the soils evaluation, they are authorized to do so. Additionally, if the septic system designer believes the site needs more substantiative investigation, they may wish to consider consulting with an appropriate professional with those credentials.

116. COMMENT: Professional engineers, health officers, registered environmental health specialists, soil scientists, contractors and septic tank pumpers all have backgrounds and experience with wastewater treatment systems. However, there are currently many individuals and companies that serve as “septic system inspectors” that do not have similar credentials. Does that mean that an attempt to register their companies on the NJDEP website would be rejected or turned down? (5)

RESPONSE: The Department anticipates establishing minimum credential, experience and/or educational levels in any voluntary registration program established by the Department as discussed in the rule proposal at 43 N.J.R. 484 with respect to the definition of “septic system inspector”. Any individual or company that does not meet those credentialing requirements will be rejected from registration until appropriate credentials are obtained.

117. COMMENT: The proposed new rule at N.J.A.C. 7:9A-3.17(a) is fully supported. (4)

RESPONSE: The Department acknowledges the comment in support of this amendment.

118. COMMENT: Even though the service provider may have an S2 license, it does not automatically mean they would understand all the different types of systems they could be taking care of. The rule should require manufacturer certification at N.J.A.C. 7:9A-3.17(b). (4)

RESPONSE: Please refer to the Response to Comment 33.

N.J.A.C. 7:9A-3.18 Requirements for certification of sewerage facilities serving subdivisions involving 50 or more realty improvements

119. COMMENT: The amendments deleting requirements of additional specific information for 10 or more realty improvements and requiring this information only for 50 or more improvements are supported. (9)

RESPONSE: The Department acknowledges the comment in support of these amendments.

120. COMMENT: The requirements for the 50 realty improvement TWA include that a copy of the local approval be provided. N.J.A.C. 7:9A-3.18(a), however, states that local approval cannot be granted until the TWA is approved. What is the appropriate sequence of events in this circular process and which “approvals” are to be filed with the TWA application? (8)

RESPONSE: The TWA application is required to include some form of official correspondence from the municipality, whether it be in the form of a preliminary subdivision approval, resolution or letter that identifies that the application is generally acceptable and meets all requirements of local zoning or other municipal ordinances that might be more stringent than State rules. Following the issuance of the TWA, the municipality may then issue its final subdivision approval. It would be inappropriate for the municipality to issue the final subdivision approval prior to issuance of the TWA because the calculated loadings might exceed the capacity of the land to support the proposed development, which is used as a basis for TWA issuance. There may also be other technical issues regarding land use land coverages and the proposed project which could further complicate issues, which could result in a project that is unapprovable under a TWA.

121. COMMENT: The proposed rule at N.J.A.C. 7:9A- 3.18(b)4 would require a “Pinelands Certificate of Compliance” or “Pinelands development approval,” as applicable, or a certification by the applicant that the project is not subject to the requirement of the Pinelands Comprehensive Management Plan (CMP). The Pinelands Commission requests that this language be modified to reference a “Pinelands Certificate of Filing” or a Pinelands “Public Development Approval” to be consistent with the Pinelands Commission’s existing document nomenclature. (26)

RESPONSE: The Department has made the suggested changes.

122. COMMENT: Under N.J.A.C. 7:9A-3.18(c), the Department should add 'licensed professional land surveyor'. (27)

RESPONSE: See the Response to Comment 47, which discusses the rules that govern licensed professional land surveyors and their responsibilities.

N.J.A.C. 7:9A-4.3 Distances

123. COMMENT: At N.J.A.C. 7:9A-4.3, the minimum separation distance between disposal fields is 50 feet, but the minimum separation distance between disposal field and property line is 10 feet. In Harding Township, property owners have stated that the installation of a disposal area as close as 10 feet of the property line on an adjacent lot infringes on their property rights to put in a disposal area within 40 feet of the same property line. The Department should make the minimum required separation distance between disposal field and property line 25 feet, splitting the minimum distance between disposal areas and thus affecting both parcels equally. (1)

RESPONSE: The setback established by N.J.A.C. 7:9A-4.3 between a property line and disposal field is to allow for adequate access to a system for maintenance of the system and if there is a need for repair or alteration of the disposal field. If a local administrative authority believes a larger separation distance is warranted for other reasons, N.J.A.C. 7:9A-3.1 allows the administrative authority to adopt a special ordinance to address the issue.

124. COMMENT: N.J.A.C. 7:9A-4.3 states, “No permit or waiver issued by any local, State or Federal entity shall be construed to permit deviation for or a waiver of the separation distance requirements listed in the Table 4.3 below.” This will limit currently occupied undersized lots from repairing/altering an existing system. At this time, DEP Water Allocation will allow well permits for these sites as long as the permit is issued with provisions that allow the new well to make up horizontal distance shortages by imposing deeper well casing beyond the minimum 50 feet depth to a vertical depth required to insure the minimum required distance from well to septic. Real estate transfers will be delayed and, most importantly, failing systems will still be discharging untreated effluent while the Department reviews applications that are best left at the local level. Setback waivers are not granted indiscriminately by the administrative authority and the administrative authority should still have the ability to grant these waivers. (7, 8, 12, 28)

RESPONSE: Pursuant to N.J.A.C. 7:9A-3.3(e)2ii, alterations to correct existing, malfunctioning systems do not have to strictly conform to the requirements of this chapter if a conforming system cannot be installed. In order to support this position, the Department will clarify the language which states, “No permit or waiver issued by any local, State or Federal entity shall be construed to permit deviation for or a waiver of the separation distance requirements listed in the Table 4.3 below.” that was proposed at N.J.A.C. 7:9A-4.3 to read (added text in boldface),, “No permit or waiver issued **outside of this Chapter** by any local, State or Federal entity shall be construed to permit deviation for or a waiver of the separation distance requirements listed in the Table 4.3 below.” This change should make it clear that the condition applies to any permit or waiver issued outside of this chapter, such as a local construction approval or another

Department program for instance the Freshwater Wetlands rules (N.J.A.C. 7:7A), since variances to the chapter can be granted through the treatment works approval process at N.J.A.C. 7:9A-3.9.

125. COMMENT: The proposed deletion of Table 4.3 footnote (1) and the amended definition of "water course" at N.J.A.C 7:9A-2.1 should be accompanied by language that mandates that all subsurface drains, particularly footing drains located on either the inside or outside of a foundation wall which discharge to the ground surface or connect to an interior sump pit(s) must be clearly depicted and labeled on all engineering design plans. If such subsurface footing or other drainage is not proposed, the rule should require that the engineering plans provide a note indicating "no subsurface footing or other drains are proposed." (25)

RESPONSE: Inclusion of all subsurface footing drains on site plans is already required by N.J.A.C. 7:9A-3.5(c)2iii. Failure of a septic system designer to locate these drains on the site plan is a violation of N.J.A.C. 13:40-7, which is under the purview of the New Jersey Board of Licensed Professional Engineers and Licensed Surveyors (Board). The Department anticipates filing complaints with the Board if applications fail to identify these drains. Additionally, the Department may ask written verification if none are indicated on the plans, especially in areas where there is evidence of a seasonal high water table due to the prevalence of these drains on new realty improvements in those types of areas. Any administrative authority may, and is encouraged to, refer any problems similarly to the Board.

N.J.A.C. 7:9A-4.5 Surface drainage

126. COMMENT: This section creates an impossible standard if literally read and it must be revised. Using the term “any additional runoff” makes it impossible to construct a septic system. The fact that you are removing grass (or trees or any ground cover) during the installation of the system means, by definition, that you are increasing runoff. Even if this is only during construction, the standard of the section will make it impossible to construct a system. The section can be misconstrued to require the installation of stormwater management structures for the installation of septic systems. This is illogical and results in very significant additional costs for the design, review, construction and maintenance of the systems. The area of disturbance, and therefore the impact, will increase to a point of absurdity. The Department has established its Stormwater Rule to deal with increases in runoff and created a threshold for stormwater design based on a disturbance area of one acre or an increase in impervious coverage of one quarter acre. These thresholds will almost never be reached with a septic system construction project. If the section of the Department responsible for stormwater management does not consider the runoff implications of a project of this scale significant, why are additional stormwater requirements being added to N.J.A.C. 7:9A? N.J.A.C. 7:9A should be standards for ISSDS and not a means of requiring additional stormwater management that is properly regulated by others. (8, 28)

RESPONSE: The Department agrees that runoff may increase with land cover changes. However, this section does not only consider various land covers, but addresses changes in the flow path or drainage path of runoff that may occur during or as an end result of the construction of a system. The concern is that there may be significant changes to the surficial flow that creates an impact on adjoining property owners, including impacts to their onsite systems, such as flow

being directed over disposal fields, which would negatively impact their performance. In addition, the section also acknowledges temporary increases in runoff provided that there is a written consensus from all parties.

The Stormwater Management rules, N.J.A.C.7:8, do not conflict with this rule. The Stormwater Management rules are limited to "major development", which is defined as disturbance of at least one acre or an increase in impervious cover of one-quarter acre or more, as indicated by the commenter, and do not limit other rules from considering stormwater management impacts. As discussed above, the concern in this rule relates to the effect of constructing an onsite system, not major development. Systems constructed under these rules can result in substantial mound heights and grade changes. System designers will now be specifically required to determine if their design will result in an impact to adjacent property owners and their systems. If there is an impact, the system will need to be redesigned or an agreement with that property owner will need to be negotiated.

127. COMMENT: N.J.A.C. 7:9A-4.5 is extremely cumbersome to the septic system designer. All attempts are made to ensure there is no additional run off to adjacent properties and during construction silt fences are used to control run off to adjacent properties. Trying to get permission in writing from adjacent property owners can be difficult if there is tension in the area. Concerns about runoff control are why a professional land surveyor is required to analyze the topography and get elevations and contours at least 10 to 20 feet beyond the existing property line to show elevations on the adjacent property to ensure that additional runoff onto the adjacent property does not happen. Perhaps a requirement for extending the area required to be surveyed

on the site plan should go into the requirements for site plan development at N.J.A.C. 7:9A-3.5(c)2iv. (27)

RESPONSE: The issues relating to evaluating surface elevations on neighboring properties in response to the amended requirements at N.J.A.C. 7:9A-4.4 are sufficiently addressed by the site plan development requirements at N.J.A.C. 7:9A-3.5(c)2. Those site plan development requirements have included a requirement to "…depict clearly the following features within a 150 foot radius around the proposed system". Those features include, at N.J.A.C. 7:9A-3.5(c)2iv., "Existing and finished grade topography (two foot contour interval) using absolute elevations or relative elevations referenced to a permanent bench-mark".

N.J.A.C. 7:9A-5.8 Criteria for recognition of zones of saturation

128. COMMENT: The Department should specifically require soil scientists to assess seasonal high water table in N.J.A.C. 7:9A-5.8(b)2. (18)

RESPONSE: N.J.A.C. 7:9A-5.1(b) requires that all soil evaluation procedures relied upon for designing a system be carried out by or under the direct supervision of a New Jersey licensed professional engineer. The Department defers to the licensed professional engineer to determine if they feel it is appropriate to consult with a soil scientist to assess seasonal high water table issues.

N.J.A.C. 7:9A-5.9 Hydraulic head test

129. COMMENT: In the case where the administrative authority is a board of health meeting only once a month, the proposal providing that the septic system designer propose the number of water level readings to the administrative authority could invoke a delay of several weeks, which is excessive. The commenter understands the responsibility of the administrative authority in this regard; however the rule should include provision for a timely determination by the administrative authority so that piezometer installation is not delayed. Timing of installation can be particularly relevant because of the weather. (18)

RESPONSE: Typically the administrative authority assigns an authorized agent often a local or regional health department, to address these day to day issues,. The board of health has the authority to require its review of testing data based upon its schedule.

N.J.A.C. 7:9A-5.10 Disturbed ground

130. COMMENT: The terms A & O horizons as used in N.J.A.C. 7:9A-5.10(c)1 and 2 should be defined in the definition section of the code. (7)

RESPONSE: The terms "A-horizon" and "O-horizon" are currently defined in N.J.A.C.7:9A-2.1.

N.J.A.C. 7:9A-6.1 General provisions for permeability testing

131. COMMENT: Proposed N.J.A.C. 7:9A-6.1 continues to authorize the Soil Permeability Class Rating (SPCR) test which is described at N.J.A.C 7:9A-6.3. The continued acceptance of the SPCR test is contrary to the most recent recommendations of the Natural Resource Conservation Service (NRCS) as provided in the current version of the "Soil Survey Manual" (Chapter 3- Saturated Hydraulic Conductivity). In this document, NRCS states: "…measured hydraulic conductivity values for a soil may vary dramatically with the method used for measurement. Laboratory determined values rarely agree with field measurements, the difference often being on the order of 100-fold. Field methods generally are more reliable than laboratory methods". NRCS goes on to caution that "Field methods are the most reliable." The NRCS further notes that various researchers have attempted to estimate saturated permeability (KSat) based on various properties including texture, structure and bulk density (such is the case in the SPCR test and the associated K class rating) but cautions that the success of individual methods varies widely, further noting that no one method works really well for all soils. Moreover, NRCS cautions that when such estimated laboratory methods are employed, the "values should only be used to compare classes of soils, not as an indication of the KSat of a particular site." NRCS goes on to note that "If site values are needed, it is always best to make several measurements at the site". Given the variability of New Jersey soils, field tests for KSat should be required in all cases. (25)

RESPONSE: While the Soil Permeability Class Rating Test does have its limitations, it is a useful tool in further investigating subsurface soil conditions. The Department proposed and is adopting changes in Subchapter 6 to allow for administrative authorities to require different types of tests (see, for example, N.J.A.C. 7:9A-6.1(b)) to fully delineate the soil conditions

present. The Department also generally recommends the use of on-site methods of soil evaluation rather than tests on soil samples that have been disturbed that are taken back to a laboratory for analysis.

132. COMMENT: The overall testing requirements are unclear. For example, N.J.A.C. 7:9A-6.1(a) requires testing to demonstrate "an adequate zone of disposal." However, in N.J.A.C. 7:9A-6.1(a)1, for a conventional system, testing is required at the level of infiltration. Does this mean, for a conventional system, that N.J.A.C. 7:9A-6.1(a)1 applies instead of N.J.A.C. 7:9A-6.1(a)? (18)

RESPONSE: The requirement to establish an appropriate zone of disposal in N.J.A.C. 7:9A-6.1(a) is applicable to every design category established by this rule. In order to determine if a conventional installation, as described by N.J.A.C. 7:9A-10.1(b)1, may be utilized, soil testing to determine the appropriate zone of disposal precedes the requirement to test permeability at the level of infiltration in accordance with N.J.A.C. 7:9A-6.1(a)1. Therefore both tests are required. Without knowing the depth of the zone of disposal, it would be difficult to properly estimate the elevation of the level of infiltration and where to conduct that test.

133. COMMENT: N.J.A.C. 7:9A-6.1 provides that the design permeability be determined at a depth that is dependant on the type of installation proposed, conventional, mounded, soil replacement, etc. The design permeability in all cases should be based upon the slowest measured hydraulic conductivity which occurs within either the zone of treatment or the zone of

disposal. The current NRCS "Soil Survey Manual" (Chapter 3- Saturated Hydraulic Conductivity) notes that "the horizon with the lowest value determines the hydraulic conductivity" of a soil type. Infiltration and percolation of effluent within a subsurface disposal facility may be impeded by low-permeability strata or substrata where such strata exhibit hydraulic conductivity rates that are slower than those that occur higher in the soil profile. The rules should specify that the design permeability shall be based upon the slowest hydraulic conductivity layer within the zone of treatment or zone of disposal. (25)

RESPONSE: Design permeability must take into account the layer with the slowest hydraulic conductivity in the zone of treatment because the limiting factor in sizing the disposal field is the longterm acceptance rate (clogging factor) of the soil in the zone of treatment. Permeability in the zone of disposal is addressed at the beginning of the subsection. The system designer must demonstrate that there are suitable subsurface conditions to hydraulically disperse the effluent after passing through an acceptable zone of treatment. Since the effluent is cleaner after passing through the zone of treatment, percolation into the subsurface environment is faster. Therefore, using the slowest permeability in the zone of treatment is appropriate for establishing the rate at which the system must be designed, whether that rate is based on the native soil or the permeability of fill material.

134. COMMENT: Why is the Department removing the ability to use the permeability class rating method to establish the permeability of fill material after installation in a disposal field? This should remain to give the septic designers options and alternatives. (27)

RESPONSE: As discussed in the Response to Comment 131, above, the Soil Permeability Class Rating (SPCR) test has limitations. While these limitations may not preclude the use of this test in other situations, they will preclude adequate evaluation of the proper installation of fill material at the site.

135. COMMENT: N.J.A.C. 7:9A-6.1(l) proposes to preclude the siting of a disposal area within 15 feet of a test location that exhibited inadequate permeability, unless three additional replicate tests are performed in the area so as to demonstrate suitability. This provision should be amended to address those situations where an inadequate permeability test result was obtained at a specific horizontal and vertical location, and the soil evaluator subsequently conducts an additional test at the same horizontal location but at a deeper vertical (lower elevation) location. It would be unnecessarily onerous to require three replicate tests in such a case. It is routine for a soil evaluator to conduct an initial test at a shallow location (to minimize potential soil replacement costs), and to subsequently test the same immediate area at a deeper depth if required to attain an acceptable permeability rate. (2, 18, 25)

RESPONSE: The Department agrees with the commenters and will modify the provision to specify that this condition applies to test results in the same vertical and horizontal test location. Soil evaluations at N.J.A.C. 7:9A-5, Determination of Soil Suitability, and 6, Permeability Testing, have always been based on horizontal and vertical delineation of soil profiles within tested areas. If one horizon within the profile is restrictive, the rules have always allowed for

extending soil evaluations to other (deeper) soil horizons vertically. This clarification to this new provision reinforces the existing provisions of the rule.

N.J.A.C. 7:9A-6.3 Soil permeability class rating

136. COMMENT: Appendix B contains the form, Form 3c,. Although Form 3c allows for recording of data (corrected readings R1' and R2' on lines 7 and 9, respectively) there is no line to record the temperature of the hydrometer calibration, as stipulated in N.J.A.C. 7:9A-6.3(f)1. A line should be added in Form 3c and in N.J.A.C. 7:9A-6.3(f)5ii to record the temperature. (18)

RESPONSE: As indicated by the commenter, N.J.A.C. 7:9A-6.3(f)1 requires that temperature be recorded. The Department agrees that this requirement should be reflected in N.J.A.C. 7:9A-6.3(f)5ii and that a line for recording the information should be reflected in Appendix B, Form 3c, and has made the suggested changes.

N.J.A.C. 7:9A-7.1 Design requirements

137. COMMENT: N.J.A.C. 7:9A-7.1(d) will require the engineer to design the system to assure that there is future access to the septic components. Keeping this in mind, would it not make sense to require a final as-built from the engineer to show that this access requirement was satisfied at the end of construction? Who knows what structures; ornaments, etc. are added after the property is taken over by the owner. (7)

RESPONSE: By providing final as-built plans, the system designer provides documentation to the administrative authority that demonstrates that he has complied with the requirement for access. The administrative authority can request a final as-built and use it to determine compliance with this requirement. There may be other proofs that are also acceptable to the administrative authority in determining compliance with this requirement. While the Department agrees that as-built plans are a very good way to document issues related to the designed access to the onsite system that should be maintained by future property owners, the Department did not feel that requiring as-built plans in every case justified the economic impact to every system constructed in the State. For example, original designs approved by the administrative authority may be sufficient to document appropriate access to systems provided they do not deviate from the approved design during system installation.

138. COMMENT: N.J.A.C. 7:9A-7.1(d) requires that a system be designed so that no existing improvements need to be removed or altered for equipment and/or replacement components to be brought to the location. A fence fits in the broad definition of a “permanent feature.” In the cases of alterations, this circumstance may be unavoidable. The intent is clear (keep access clear for maintenance), however the language is too broad and needs to be modified. Also, not every accessory structure is permanent and can be moved. (8, 27)

RESPONSE: The requirement to design a system so as to provide clearance for equipment and replacement components to access the location of the system without removal of permanent structures or other listed features applies to every system that must strictly comply with the rule,

such as new construction or expanded systems. Alterations to correct existing, malfunctioning systems are not required to attain full compliance with the rule if strict compliance cannot be achieved. This is evidenced in provisions such as N.J.A.C. 7:9A-3.3(e)2ii, which specifies that alterations to correct existing, malfunctioning systems do not have to strictly conform to the requirements of this chapter if a conforming system cannot be installed. Accordingly, if an existing system that needs alteration to address a malfunction already has limited access due to the location of permanent improvements such as a fence, the design would not necessarily be required to show that fence removed. However, it is important for access to systems for adequate maintenance and repair be maintained whenever possible. Therefore, the Department would recommend that fences be appropriately gated to allow for access to maintain the system.

N.J.A.C. 7:9A-7.3 Type of wastes

139. COMMENT: N.J.A.C. 7:9A-7.3(e) excludes the discharge of specific materials to an onsite system unless so authorized by a NJPDES permit. The list of prohibited materials should be expanded to include milk, and high carbohydrate (and high BOD) materials including, but not limited to, soda, fruit juice and brewery, winery and other fermentation product wastes. (25)

RESPONSE: The adopted amendments to N.J.A.C. 7:9A-8.1 specifically deal with high strength wastes (see the Response to Comments 27 and 28 concerning changes to the terminology of high strength wastes) associated with commercial food service derived wastes such as milk, and high carbohydrate products including, but not limited to, soda and fruit juice. The proposal at 43 N.J.R. 500 discussed the additional treatment needs of commercial food service activities due to

high organic loadings associated with these activities. Wastes derived from milk and high carbohydrate products are similarly a source of these high organic loading problems and would need to be addressed with the appropriate treatment devices adopted into the rule and therefore do not need to be prohibited. Milk processing wastes, as well as brewery, winery and other fermentation product wastes are process waste streams that are beyond the scope of the chapter and should be referred to the Department as instructed at the existing N.J.A.C. 7:9A-7.3(c).

140. COMMENT: N.J.A.C. 7:9A-7.3(e) refers to certain commercial activities that shall not discharge to on-site systems without authorization through a NJPDES permit due to the potential for the presence of significant quantities of blood, hide, flesh, etc. A specifically identified example activity included “surgical procedures”. This would seem to preclude the design of a system for a physician or a veterinary office under the standards. In many physician or veterinary offices, activities considered minor surgery such as dermatology procedures, animal spaying or neutering would not conform to these regulations, even though these procedures do not create what would be considered “significant quantities of blood, etc.” It is understood that some veterinary facilities provide large scale surgical activities that should fall under the NJPDES permitting requirements. The Department should consider modified wording other than the generic “surgical procedures” thus not preventing facilities that provide some minor procedures from being served by an individual subsurface sewage disposal system. In the event that the flow is less than 2,000 gpd as determined by these regulations, but the uses and wastewater strength are such that a NJPDES permit is required, is the system still considered to be an on-site subsurface sewage disposal system from a Water Quality/Wastewater Management Plan perspective? (2)

RESPONSE: The permit-by-rule provisions of N.J.A.C. 7:14A-8.5(b)1 authorize realty improvements that are not single family residences to be approved under this chapter by administrative authorities provided they are discharging sanitary waste only and comply with all conditions of these rules. Since the discharges described in this comment are not considered domestic in nature when compared to the wastes traditionally associated with single family residences, such as bathrooms, kitchens and laundry, these facilities are more appropriately regulated by the Department prior to local construction approvals that might not address necessary treatment or monitoring. The Department will provide written responses to administrative authorities regarding specific questions submitted on the applicability of this provision to a specific project based on the details of that project.

Applicants will need to review the approved wastewater service area designation in an adopted WMP to determine if new non-sanitary discharge to ground water less than 2,000 gpd would be allowed or if those areas are limited to sanitary discharges only.

N.J.A.C. 7:9A-7.4 Volume of sanitary sewage

141. COMMENT: Since 1997, all commercial buildings require toilets with 1.6 gpf (gallons per flush). This implementation has changed the entire computations for the sewer flow, but our sanitary and septic codes are still using the sewer flow numbers from 1980's and 1990's. Taking into account the above mentioned requirements, proposed numbers for sewer flows are not correct and over-exaggerated due to the 1.6 gpf requirements. Flow computations need to be revised to accommodate 1.6 gpf plumbing requirements. Several examples of potential changes

are provided. Specific numbers should be incorporated into the rules as much as possible since open ended rules can lead to subjective interpretations and uncertainties in implementation. Highest probable flow numbers or some other methodology should be employed to compute flows for fast food outlets, which are very common in today's social and economical environment. (13)

RESPONSE: While there have been changes to plumbing subcodes over the years, pollutant loadings per resident/residential dwelling have remained consistent. Reducing the actual volume of water means there is a greater amount of pollution per gallon of waste than existed under previous plumbing codes. Sizing disposal fields for lower flow rates without reducing the pollutant loadings would result in inadequately sized systems to treat the mass loading of pollutants entering the system. Additionally, the code must take into account that not all structures/fixtures have to be upgraded when an onsite system is replaced. Subsequently, changing these flow rates without a corresponding change in the calculations that establish the pollutant loading to those systems would create a disparity that could result in malfunctioning systems throughout the State.

142. COMMENT: These rules have no specifics for categorized restaurants. (13)

RESPONSE: As discussed in the rule proposal at 43 N.J.R. 498, N.J.A.C. 7:9A-7.4(f) requires facilities with commercial food service, which would include all restaurants, to obtain a treatment works approval from the Department for the determination of flow. Typically, the

flow is estimated by multiplying the maximum total seats by 35 gallons per seat, which is the flow established at N.J.A.C. 7:14A-23.3(a) for average restaurants discharging to a treatment plant. However, many restaurant applicants prefer to use actual water use data or other means to justify a lower flow volume. Use of these bases for calculating projected flow has often resulted in poor design due to the failure of the calculation to account for the high strength of the waste. The Department will examine proposals based upon both the estimated volume of sewage generated and the wastewater pretreatment proposed as part of the design for these facilities under a TWA.

143. COMMENT: Flows for a "Motel" are defined as 130 gal/room/day. However, N.J.A.C. 7:9A-7.4(f) requires all "Hotel" activities to apply for a TWA regardless of calculated flow. Is this correct?

RESPONSE: The commenter is correct. Most hotels have more than 15 rooms and have other amenities (restaurants, banquet rooms, pool shower facilities, etc.) that would typically exceed 2,000 gallons per day, so they would not be regulated under this chapter. However, a motel may be small enough in size that it only produces projected flows that would be regulated pursuant to this chapter. If a hotel facility has fewer than 15 rooms and no other amenities and believes it appropriately regulated under this chapter pursuant to the permit by rule at N.J.A.C. 7:14A-8.5(b)1, then a treatment works approval could be applied for to appropriately determine the design volume for that proposed facility. If a facility has less than 15 rooms and no other amentities, but is identified as a hotel and not a motel, use of the appropriate criteria as defined

by the rule, even though the facility is not labeled as such, may be considered by the administrative authority without obtaining a TWA.

144. COMMENT: A flow calculation exemption should be granted for facilities that have infrequent activities that result in short term larger discharges that are accommodated by portable toilets. For example, a park that normally has 40 visitors per day may have an annual three day "fair" that draws thousands of visitors during that singular event. (15)

RESPONSE: Regarding the use of portable toilets at a park facility, there is no design volume unless a realty improvement is proposed. Without knowing what types of realty improvements are proposed, it would not be possible for the Department to calculate an appropriate design volume. Whether portable toilets may be acceptable would depend on the proposed activities and/or associated structures.

145. COMMENT: N.J.A.C. 7:9A-7.4 becomes very confusing when compared to NJDEP's requirements for sanitary sewerage under N.J.A.C.7:14A. The volume listed in this code is sometimes different than the volumes in treatment works. Both requirements should be the same. (27)

RESPONSE: There is a fundamental difference between individual subsurface sewage disposal systems under this chapter and those systems falling under N.J.A.C. 7:14A that are for larger

scale treatment works projects. Those projects regulated under N.J.A.C. 7:14A typically have large treatment facilities and collection systems that are designed to have equalization and storage capacities to deal with surge flows and disparate flow volumes discharging to the system. Systems designed under this chapter have no such capacity and must therefore be designed to a highest demand volume standard to deal with those flows. For facilities subject to the NJPDES rules, septic system designers often use the design standards of this chapter when designing systems at facilities which utilize septic systems. However, based on the limitations of the rule which apply to systems less than 2,000 gallons per day, some calculations within the chapter do not directly correlate to larger systems. These differences include, but are not limited to, the sizing of treatment tanks and pump size calculations in these onsite systems.

146. COMMENT: Is the flow applicable to warehouse facilities in Table 7.4(a), 155 gallons or 15.5 gallons? (11)

RESPONSE: In the proposal at 43 N.J.R. 528, the criteria in Table 7.4(a) for a warehouse facility is 15 gallons per day per employee, based on the maximum number of employees, with an additional five gallons per day per delivery/field personnel anticipated to be at the warehouse on any given day.

147. COMMENT: The instruction at N.J.A.C. 7:9A-7.4(c) is unclear: “The total expected volume…shall be calculated by adding the daily volume…” Added to what? In the example when a company has monitored information on usage, such as at another facility’s location, and

that usage is lower than the design values, the rules should allow the administrative authority the option of changing the size of the system. (18)

RESPONSE: The Department proposed to change the method of calculating the volume of sanitary sewage from a method that relied simply on naming the type of establishment to that which relies on the activities occurring at a proposed facility. To that end, it would be necessary to calculate a volume for each activity and then to calculate a total volume for the entire proposed project by adding those different activities. Alternative methods of determining design volumes, such as actual water use data from another facility, may be allowed under a treatment works approval issued by the Department.

148. COMMENT: The commenter notes that changes are proposed to the design flow criteria and supports these improved criteria. Facilities are broken down to differentiate between commercial and residential uses at proposed N.J.A.C. 7:9A-7.4(b) and (d). The commenter encourages the Department to ensure timely processing for commercial use approvals, given its new role in the process. (9)

RESPONSE: For facilities that require a treatment works approval for the determination of a volume of sanitary sewage, those approvals are subject to a 90-day approval calendar from the time the Department receives an administratively complete application. The Department anticipates that changes throughout the rule that reduce the number of treatment works approval applications, such as those allowing the incorporation of advanced wastewater pretreatment

devices, will allow the Department to continue to issue decisions on these approvals in a timely manner.

149. COMMENT: The rationale for the additional design flow associated with medical offices at N.J.A.C. 7:9A-Table 7.4(a) footnote 3 does not seem to be justified. There are a broad range of "medical" uses, such as doctors, dentist, chiropractors, physical therapist, speech therapists, psychologists, etc. While some may require an additional flow, most do not. This requirement will have the unintended consequence of preventing the change of use from a "normal" office to a medical office in a location where otherwise it is permitted. In locations like the Highlands Preservation Area where changes in use that increase flow are problematic or even prohibited, it essentially forecloses the ability of doctors to move to new spaces or for new doctors to establish their practices. The change also means that any building with a medical use that was designed using only the 0.125 gal/sf/day standard has a non-compliant system. (8)

RESPONSE: The proposed additional design flow to be applicable to medical offices was intended to capture the additional flow generated by those medical offices with higher than typical water use, such as those where staff wash hands between individual patients or patients use water as part of normal procedures. The Department agrees that there are other medical offices that would be included within the term "medical office" that would not be anticipated to generate additional flows. As the proposed language captured facilities the Department did not intend and could conflict with other requirements, such as the rules applicable in the Highlands, the Department is therefore not adopting this change.

150. COMMENT: The proposed rule text at N.J.A.C. 7:9A-7.4(c)3 requires a TWA permit for the determination of the wastewater flow when the facility activities do not fall under the activities outlined in Tables 7.4(a) and (b) and in those cases where the administrative authority questions the determination of the design flow. Does the Department anticipate a “streamlined” TWA application process when the only issue to be considered is flow? The current procedure and what appears to be proposed by these regulations is that the administrative authority reviews and certifies that all aspects of the design except those noted on form WQM-006A conform to the regulations and that the TWA review is limited to only those aspects not conforming. With a flow issue being questioned, no design would be prepared prior to submission of the TWA application. Secondly, will the minimum TWA application fee (currently $850.00) be assessed for the determination of flow? (2)

RESPONSE: The Department is finalizing a technical manual to assist applicants applying for all treatment works approvals, including those that would establish the estimated volume of sanitary sewage. On an application seeking determination of design volume only, the administrative authority would sign the certification indicating their review to those limited matters. The Department will address in the technical manual the issue of how the administrative authority endorses the WQM-006a form to reflect that there is only a limited review peformed by the administrative authority due to the nature of the application for determining the design volume of the system. Applications that have been deemed administratively and technically complete from the date of initial submittal are typically processed faster than those that have outstanding issues.

The Department anticipates that the technical manual will assist applicants in submitting proper applications that can be processed as quickly as possible. Applicants that are requesting a treatment works approval for determination of design volumes will be subject only to the minimum fee provided in the rule. However, the Department anticipates that these applications will be at a minimum since the Department will continue to work with administrative authorities to determine appropriate design volumes based on Tables 7.4(a) and 7.4(b) and only those that truly cannot conform with those tables will apply for this approval for the Department to establish the appropriate design volume. The Department has issued design volume calculation approvals in the past, with many volumes being established at volumes greater than 2,000 gallons per day, requiring permitting under N.J.A.C.7:14A rather than this chapter.

151. COMMENT: N.J.A.C. 7:9A-7.4(c)3 requires a TWA to determine the design flow for certain systems. Earlier in the rules, the requirements for TWAs are provided and it appears some of these (such as local approval) cannot be provided since the system has not been designed. If a TWA is going to be required to determine the design flow, an application specific checklist must be created by the Department. (8)

RESPONSE: The Department agrees with the commenter and anticipates the issuance of a technical manual for treatment works approvals issued pursuant to this chapter, which will include specific information regarding applications for volume determinations.

152. COMMENT: The table shows volumes for camp uses (item 14), yet subsection (f) states that campground facilities shall apply for a TWA. This is unclear. Does a septic system on a campground (daily flow less than 2000 gpd) automatically require a TWA, or can the volumes of 100 gpd/site simply be used? (18)

RESPONSE: Item 14 is located at 43 N.J.R. 527 as bracketed text, which is proposed for deletion from the existing chapter and is therefore not applicable. These facilities must either apply for volume approval under a treatment works approval if the applicant believes the total design volume for the property is less than 2,000 gallons per day or apply for permit under N.J.A.C. 7:14A.

153. COMMENT: At N.J.A.C. 7:9A-7.4(e), the use of portable or temporary facilities is prohibited to reduce the design flow of a system. However, this does not account for special events or seasonal use. Very often there are short term events that dramatically increase the number of people on a property. Designing a system for this number is impractical. County fairs, balloon festivals and summer camps (public and private) are only a few examples. There needs to be specific language related to short term special event and seasonal use. (8)

RESPONSE: Once a realty improvement is constructed, it is often difficult to police the ongoing use of that realty improvement to ensure limited use continues. Further, onsite systems are designed to accommodate the single highest daily demand use due to a lack of equalizing capacity in the engineering design of these systems. In the past, seasonal use residences had

been granted lower volume estimations. However, many of these older, seasonal use homes have been converted to year round use, often with no upgrades to the older, non-conforming systems or non-systems. The Department does not believe continued approval of reduced flow projections in such a situation is appropriate. Regarding special events, often times there are no realty improvements associated with those events. Many county fairs, balloon festivals, etc. operate with no permanent structures. If there are no proposed realty improvements and access to existing structures is prohibited for those events, flow would not be required to be accounted for in the total design volumes for the system(s).

N.J.A.C. 7:9A-8.1 Grease traps

154. COMMENT: This section seems to say there are “active grease removal components” that utilize biology and chemistry to decrease the grease in their effluent enough to bring the entire waste strength down to residential strength and allow for the use of a conventional drain field. In systems that produce enough grease to require grease removal components, a proven advanced wastewater pretreatment system designed specifically for this type of application needs to be used. The term “active grease removal component” is misleading as these are really advanced wastewater pretreatment systems that have been specifically designed to handle this type of waste and have a history of treating high strength wastewater. Also, the design and history is important as the commenter indicates they have seen more and more systems that have no history put together design calculations to attempt to demonstrate they can treat this type of wastewater, but have no operating history to substantiate it. In theory, the calculations may work, but the operation of the systems is daunting and it is costly to maintain treatment levels.

Such advanced wastewater pretreatment systems for high strength wastes are simply not appropriate for use in the onsite wastewater treatment system industry. (4)

RESPONSE: See the Response to Comment 28. The Department is changing the term “active grease removal” to “high strength wastewater pretreatment component” to be consistent with nationally recognized industry terminology for the devices described in the proposal at 43 N.J.R. 500. Similarly, the Department is also modifying the heading of this section to properly identify these system components.

There are relatively few of these types of systems installed throughout the State at this time, which makes it difficult to address these advanced wastewater pretreatment devices from a historical design point of view. There is currently no nationally recognized certification or standard for these products. N.J.A.C. 7:9A-8.1(i) requires that these systems be certified by a septic system designer to actively treat and therefore reduce the high strength waste to levels prescribed in that subsection. The Department believes this is an appropriate certification, which an administrative authority can accept to ensure these systems reduce the required organic load on a case by case basis, since there is no nationally recognized standard to certify these system components.

155. COMMENT: The Department should evaluate and approve the types of “Active Grease Removal Components” the administrative authority can approve. The commenter has spoken with an engineer with contacts in grease reduction technology and he stated that designing a system that would guarantee what the Department requires would cost thousands of dollars. The

administrative authority may not have the technical background to evaluate proposed systems to ensure they will function to reduce the required organic load. Any system that would require an active grease removal component should be required to obtain a TWA. The NJDEP is in a better position to keep up with technological advances in grease removal technology. (7)

RESPONSE: Since 1999, advances in technology have occurred at a faster pace than could be reflected through periodic rule amendments. Accordingly, the Department believes it more appropriate to establish standards to which systems for these facilities that generate high strength wastes must comply and allow system designers to determine the appropriate technologies to meet those standards. With regard to price, as indicated in the Economic Impact statement at 43 N.J.R. 512-513, the costs associated with these upgraded systems are outweighed by the increased protections of human health and the environment. The Department also anticipates that with more systems using these technologies and further advancements in those technologies, costs will decrease. Further, the replacement of systems that constantly malfunction due to insufficient design typically exceeds the costs of a single, long-lasting system that performs to appropriate standards.

The proposed language at N.J.A.C. 7:9A-8.1(i) requires that these systems be certified by a septic system designer to actively treat and therefore reduce the high strength waste. The administrative authority can accept this certification to ensure these systems reduce the required organic load.

156. COMMENT: The specified treatment numbers are not feasible and are clearly outside of the economic ability of any small food or restaurant establishment. (15)

RESPONSE: As indicated in the Economic Impact statement at 43 N.J.R. 512-513, the costs associated with these upgraded systems are outweighed by the increased protections of human health and the environment. In addition, the costs associated with properly hauling wastes when a system malfunctions, as is typically done while permanent corrections are planned, permitted and implemented, are significant. Coupled with expenses related to shutting down, designing and installing a new system and the potential damage to human health and the environment, the total costs of operating a system without sufficient pretreatment are typically much greater in the long run than properly designing a system for a facility that generates high strength wastes. If a facility does not believe it is capable of installing, operating and maintaining an appropriate system for its discharge, it should consider locating to an area where a utility authority can manage the waste on their behalf.

N.J.A.C. 7:9A-8.2 Septic tanks

157. COMMENT: All septic tanks regardless of use or size should have at least two compartments. The additional cost is insignificant with respect to the increased protection provided. (11, 15)

RESPONSE: The Department agrees that two compartment tanks are a significant improvement over single compartment tank designs. The Department will explore this design enhancement as part of future rulemaking deliberations with the Advisory Committee.

158. COMMENT: Tank outlet protection should be limited to effluent filters or septic solids retainers. Gas deflection devices are unreliable. (15)

RESPONSE: The amendment to N.J.A.C. 7:9A-8.2(j)3 being adopted at this time requires a septic solids retainer or septic effluent filter meeting certain standards to be installed and maintained at the outlet of the septic tank(s) prior to the effluent distribution network. Gas deflectors are not required where an effluent filter is used, but are required when a tee or baffle is used between tank compartments or between tanks connected in series prior to the outlet of the final septic tank discharge to the effluent distribution network. While a gas deflection device is less reliable than an effluent filter, a properly installed gas deflector does provide a certain level of protection for a tee and baffle, when specified by the septic system designer between tanks in series or between tank compartments, from off-gassing related to the biological breakdown of organic solids in a septic tank. The Department does not agree that eliminating gas deflectors in those instances would be appropriate.

159. COMMENT: N.J.A.C. 7:9A-8.2(m) must be rewritten to provide adequate standards for watertight testing all septic tanks, regardless of construction materials or manufacturing process.

Florida has established comprehensive standards for all tanks that should be incorporated into New Jersey rules. (17)

RESPONSE: The Department has established standards for watertightness testing all septic tanks at N.J.A.C. 7:9A-8.2(m). However, there are inherent differences in the types of materials used in constructing septic tanks that require different standards for different types of materials. The Department believes standards for watertight testing concrete tanks do not necessarily apply to tanks of other materials and requiring all tanks to meet one set of standards could preclude use of other appropriate materials. Flexibility is warranted to allow manufacturers of other products to establish an appropriate methodology to test those tanks.

The Florida program incorporates a review of all tank manufacturers and each of their products, which are subject to individual approval as well as a number of different construction standards that are not addressed in this chapter. The Florida program also institutes a program to register septic tank contractors, which enables their program to have direct oversight of those individuals working with onsite systems. Therefore, integrating Florida's watertightness testing requirements with the Department's rule would not be appropriate at this time.

160. COMMENT: Is a TWA required for an ejector pump since the flow to the tank is not by gravity? (8, 28)

RESPONSE: See the Response to Comment 98.

161. COMMENT: The use of the testing methods described in the proposed subsection will create major expenses that would have to be passed on to the homeowner. As an example, currently only the installer has to be ready when a tank delivery is scheduled. With the inclusion of these testing procedures, someone is going to have to pay for the testing equipment and someone is going to have to pay for the delivery person to wait for the engineer or the authority to arrive to witness the test. All this waiting while a $250,000 truck sits idle or, in the converse, the driver has several sets of testing equipment, sets up one set of the testing equipment, leaves and then comes back another time or day to retrieve the testing equipment. This could mean a cost of more than $100,000 worth of equipment in the field and hiring a new employee just to keep track of the equipment and retrieve it after testing. Unless great care was taken with regards to manpower coordination, this type of testing could easily double the cost of the tank to the consumer after all these expenses are considered. This, knowing full well that what might or might not be leaking is leaking directly adjacent to where it is going to be leaked back into the ground to begin with. While in a perfect world the inspector or engineer is there and this whole process adds only one hour to the cost, this in reality is New Jersey, not the perfect world. While the commenter has no problem with having testing to assure watertight tanks to a point that would simulate failure, other more reasonable means of testing and approving must be used. (11)

RESPONSE: The options provided in this chapter have various related expenses, some of which are not as expensive as indicated in the comment. The purpose of having an onsite system that can provide adequate levels of treatment prior to discharging to the environment is to protect

human health and water quality. Without watertight vessels to provide this treatment, there is no potential for the system to accomplish this necessary goal. While a tank can be demonstrated to be watertight at a manufacturing facility, this is far removed from the transport, delivery and installation of that tank at another location. As indicated in the proposal at 43 N.J.R. 501 and by commenters on this proposal (for example, see Comment 177) many new tanks have been observed during installation with no notable issues and have ultimately been found to not be watertight following installation. Therefore, demonstrating that tanks are watertight after installation is necessary. If the Department receives credible information on other methods or reasonable means of testing and certifying installed tanks, the Department will consider those methods in future rulemaking.

162. COMMENT: In accordance with N.J.A.C. 7:9A-8.2(f), the administrative authority has to be assured that treatment and dosing tanks will not shift in high water situations. However, the code does not provide buoyancy calculations or calculation methods for the administrative authority to verify engineer claims. At the minimum, the Department should require that an engineer certify that the tanks will meet this requirement. (7)

RESPONSE: Buoyancy issues are already addressed. N.J.A.C. 7:9A-8.2(f) specifically requires the design engineer to show that the tank will not shift or float during periods of the seasonal high water table on the required certified plans or in a separate certification to the administrative authority. All administrative authorities should require this or a separate certification whenever buoyancy issues are a concern.

163. COMMENT: The new requirement at N.J.A.C. 7:9A-8.2(l)2 for labels on septic tanks is not practical. At best, some type of medallion will need to be attached to the manhole or riser. These will need to be engraved and will be easily worn off. If mounted inside, it is not likely that any adhesive will be able to secure the medallion to the riser in the atmosphere of the septic tank. They will end up dropping to the bottom of the tank. The real answer is good records with the administrative authority. Also, will a system be “non-compliant” because the medallion is not legible, broken off or lost in the bottom of the tank? This is an impractical requirement and should be eliminated. Currently all of the tank suppliers and many of the plumbing supply houses provide cast-iron, bolt down, water-tight lids. These lids can be purchased un-labeled, or with "SEPTIC" cast clearly on the lid. The commenter's company, since these lids have been introduced, has been using them as its standard. There is no significant reason to add language at N.J.A.C. 7:9A-8.2(l)2 to add a label telling a homeowner that lives in Saddle River, NJ that the administrative authority is the Saddle River Board of Health and other information that is clearly available on file in the form of an as-built drawing. This labeling would only serve to annoy a homeowner that already does not want to see the cast-iron lids in the first place. Custom signs displaying the information described in the rule proposal would add cost with little benefit. Instead, the Department should require that the locking cast-iron lids be marked "septic", the cover bolts be pre-coated upon installation with anti seize compound, and that a sealed copy of the as-built plan be given to the homeowner, contractor, and administrative authority. (8, 22, 28)

RESPONSE: As described in the proposal at 43 N.J.R. 501, these amendments facilitate the amendments at N.J.A.C. 7:9A-12.6, which require certain information to be collected and certain system components to be inspected during system inspections conducted for real property transactions. These amendments assure that homeowners and septic system inspectors will be able to find information about the present system more efficiently and effectively. Since under the adopted amendments, manholes are extended to finished grade, there is no longer a need for a permanent marker above the manhole to indicate its location. While the label required by this section could be located on the outside of the lid, it is anticipated that it will be far more common that this label would be located beneath the lid or just below the lid, inside the tank riser. As described in the proposal, the purpose of the label is to provide septic system inspectors or other system professionals with information that will be helpful and readily available to identify and troubleshoot the system. By providing information on the approving authority for the system design, those health departments that have switched and regionalized over the years can be differentiated from the original approving authority, providing information on where records might be located if there is difficulty in obtaining those records. Similarly, if a residential home is being sold as a four bedroom home and the label indicates approval for a three bedroom home, the septic inspector can immediately and definitively identify a problem to the affected parties which could potentially impact that transaction. The Department agrees with the commenter that property owners and administrative authorities should have final as built copies of the installed system. However, the Department recognizes that, as properties change hands, certain paperwork can get lost and as health departments become more regionalized, the transfer of records is not always seamless. This simple measure can help the process of finding baseline information quickly and effectively and is therefore required by the chapter.

Additionally, there has been much advancement in technology that will allow for proper labeling to occur. Other than size and information to be included on the label, the Department has not specified what materials must be used for the label or how it should be affixed beneath the manhole lid or within the manway, leaving open many options for various materials, engraved or imprinted, alone or in sleeves and various adhesives or clips that could be used to attach the tags. However, the tag provided should consider the effects the septic tank environment will have on that tag and ensure that the materials specified are resistant to those harmful effects.

164. COMMENT: Existing N.J.A.C. 7:9A-8.2(i)3 references a 2 to 1 length to width ratio for tanks that are rectangular in cross section. In light of the proposed change in N.J.A.C. 7:9A-8.2(i)4 that a cylindrical tank must be six feet in length and three feet in width without the previously required 2 to 1 ratio standard, rectangular tanks should also be held to the same size standard and not have the added burden of the 2 to 1 ratio. In the alternative, round or oval tanks should continue to be required to comply with the 2 to 1 width to length ratio applicable to rectangular tanks just to be fair. All of this impacts costs associated with production and trucking. (11)

RESPONSE: The Department did not propose removing the requirement for a 2 to 1 ratio for rectangular tanks as part of this rule making but anticipates reviewing changes to this section as part of future rulemaking. As such, the Department will present this issue to the Advisory Committee for consideration.

165. COMMENT: Requiring at N.J.A.C. 7:9A-8.2(j)3 the installation of effluent filters in the outlet baffles of all new septic tanks makes sense and the commenter believes they can help to extend the life of a septic system if they are properly maintained. Although the proposed amendment indicates the septic solids retainer or septic effluent filter must be installed and maintained in accordance with this chapter, there is not much information concerning maintenance. In the explanatory preface, it was stated that a back-up would result if regular filter cleaning was not done, but that information was not carried forward. If homeowners are not made aware that filter cleaning cannot be ignored and that a contracted service program is recommended to best accomplish that goal, back-ups and overflows will result in filters being removed throughout New Jersey, allowing sewage solids to freely migrate out of the tank, leading to eventual clogging and premature malfunction. It is also important to note that the frequency of cleaning effluent filters is determined by the water use within the home, the volume of the septic tank and the number of compartments in the tank. A smaller family disposes of less wastewater and there would generally be fewer solids caught on the filter. A larger tank allows more settlement time, which means fewer solids on the filter and a two-compartment tank allows secondary settlement, which means a four-inch filter might suffice instead of a six-inch filter. (5)

RESPONSE: The Department agrees with the commenter that appropriate maintenance is key to assuring that a septic system continues to operate as designed. Failure of systems due to improper maintenance and removal of filters is pervasive. As indicated in the summary of N.J.A.C. 7:9A-12.2, the purpose of the new provision is to specify maintenance requirements

designed to ensure that a system continues to work as designed. The rule text includes a list of some of the types of maintenance activities necessary to ensure this continued proper functioning of the system. The Department agrees that it is important to specifically identify the effluent filter as one of the components of the system that must be checked and cleaned out periodically to assure continued operation of the system as identified in the proposal summary. Accordingly, the Department is amending the proposed system maintenance requirements specified at N.J.A.C. 7:9A-12.2 to add a specific reference to effluent filters in subsection (b) to identify the need to maintain effluent filters. The Department would also encourage professionals in the industry to talk to their clients regarding the importance of maintaining their effluent filters and the danger associated with not maintaining those filters. The Department will also be updating its website and informational materials to stress the importance of effluent filter maintenance as one part of the required maintenance of the overall system. Website informational materials are available at http://www.state.nj.us/dep/dwq/owmp_main.htm.

166. COMMENT: Effluent filters are one of the major advances that have come along in our industry in the last 50 years. But recently they have gotten a bad reputation because there are a lot of cheap products available that perform poorly. With the nature of regulations being what they are, the minimum required typically becomes the standard. Therefore, it is up to the rules to set quality minimums. The Department should require maintaining NSF Standard 46 certification and a high flow rating to get longer performing filters into New Jersey. The Department must write a rule that forces manufacturers to compete on features and benefits of products rather than concentrating on how the cheapest product can be produced to meet that minimum requirement. The difference is the consumers will be stuck with a poor performing, high cost maintenance

intensive requirement or will they have an economical treatment field protection device installed in their system. (3, 24)

RESPONSE: The Department agrees that it is important that filters that are used be well-constructed and have as long an effective life between cleanings as possible. However, it is difficult to establish a standard based on duration of effectiveness between cleanings without an industry standard to refer to or on which to otherwise base that standard. The commenters provided information that indicates there is a substantial increase in effectiveness of effluent filters with a minimum six-inch diameter (or equivalent) when compared to those that are smaller in size. Therefore, the Department will modify the requirement at N.J.A.C. 7:9A-8.2(j)3 to specify that the Department recommends that filters also be a minimum of six inches in diameter (or equivalent area) measured at the inlet to the filter. However, use of smaller-size filters will not be prohibited at this time until the Department has determined if a mandatory minimum diameter of six inches is necessary. Any such change would be the subject of future rulemaking. Should an industry standard be developed with regard to acceptable cleaning frequencies, the Department will consider including that Standard in future rulemaking.

167. COMMENT: Effluent filters are being used more frequently, though not on all plans. However, they should not be used in lieu of a Tee type baffle for this reason; a homeowner or contractor discovering a blockage at the out-flow filter may not sufficiently pump and clean the tank before pulling the filter allowing the scum layer to flow freely into the next component. Should the next component be a distribution box, the resulting flow of scum would then be

introduced to all of the distribution lines, resulting in untold damage to the system. In the case of a pressure dosing system, should a secondary settling tank not be present in the system, the scum layer could be immediately ingested into the effluent pump, and delivered thoroughly through all of the distribution lines. The results of either scenario are catastrophic to the homeowner in terms of repair costs. A suggestion would be to require a PVC T baffle, with an effluent filter accessible at grade. The filter could be withdrawn from the Tee baffle without fear of releasing scum, as described above, and would be serviceable by the homeowner. (22)

RESPONSE: The Department agrees that scum or even solids entering the disposal system as the result of poor maintenance practices such as removing an effluent filter prior to lowering the tank level below the outlet invert is a concern. This condition occurs when system owners fail to properly operate and maintain their tanks and the accumulation of solids and scum exceeds the ability of the tank to retain those materials. Without an effluent filter, these materials are freely passed on to the disposal field. However, simply requiring a tee would not eliminate all scenarios in which scum and/or solids could potentially be discharged to the disposal system. Further, installation of a tee could create other problems if the tee blocks air flow through the system which could potentially contribute to the buildup of hydrogen sulfide and other gases in the system that may result in degradation of concrete system components and other hazardous conditions. While a tee baffle will not resolve all of these issues, the Department will modify the section to encourage the inclusion of devices to eliminate flow out of the tank when the filter is removed for maintenance. Those devices can help address this problem if they are used properly. The Department will be making improvements to outreach materials on the Department’s

website (http://www.state.nj.us/dep/dwq/owmp_main.htm) and will also include the topic in the various other outreach activities that are conducted.

168. COMMENT: Good access, made more easily available by requiring manhole covers to be installed at grade, is important to allow for regular maintenance of a septic tank. If effluent filters are present, it is important that homeowners understand that such regular maintenance involves filter cleaning, as well as tank pumping. It is also important that homeowners be reminded that there are dangerous gases present in septic tanks and any attempt on their part to reach in and remove a filter for cleaning might lead to personal injury. (Risers over main access holes can be fairly deep and require the service provider to reach down with the aid of a hook to pull a filter, exposing that individual to methane and hydrogen sulfide gases.) In the past, the NJDEP has not recommended that homeowners maintain their own tanks, for this reason. (5)

RESPONSE: As mentioned previously in Response to Comment 165, the Department is requiring maintenance at N.J.A.C. 7:9A-12.2 and is improving its online materials to better inform system owners. While the rule does not prohibit homeowner from performing maintenance, those materials include the recommendation that homeowners retain properly trained individuals to maintain systems, including effluent filters.

169. COMMENT: The requirement at N.J.A.C. 7:9A-8.2(l)2 for bolted or locked manhole covers seems excessive. Manhole covers are very heavy and cannot be lifted by children. (8, 28)

RESPONSE: The requirement for bolted or locked manhole covers is not a new requirement. This requirement was previously contained in the Code at N.J.A.C. 7:9A-8.2(l)2. Further, this requirement is consistent with EPA's Onsite Wastewater Treatment Systems Manual (EPA/625/R-00/008). The need for bolted or locked manhole covers is not limited to the protection of children who might lift the lids and accidently fall into an open tank. This requirement also assures that open lids will not contribute to septic tank malfunction by allowing rainfall, dirt or debris into the tank or create odor problems in the area. Bolting or locking lids also acts as a deterrent for potential theft or vandalism.

170. COMMENT: The State would be well advised to require a complete set of plans marked "approved" by the governing authority be attached to the building sewer of the house. This could be accomplished by the contractor on completion and approval of the system with the only added cost being the case to hold the print. This would allow complete information on the system including design date, approval date, tank size, and bed or other disposal type size and location. If it is missing, it would be at the cost of the current owner to obtain a new copy. That copy or the original could then be marked with information regarding who did the inspection last and when. (11)

RESPONSE: The Department does not believe that the attachment of a copy of the as-built plans on the building sewer is a viable requirement that will be practical for all system owners and will therefore not be making the suggested changes. Many homes are constructed on a slab

foundation or have finished basements where access to the building sewer is impractical. However, in the case of an unfinished basement, the attachment of as-built plans to the exposed building sewer would be convenient and helpful.

171. COMMENT: Why do the manholes need to be extended to finished grade at N.J.A.C. 7:9A-8.2(l)2? The requirement to within six inches of finished grade was fine. The purpose of an as-built plan is to find these components, in addition, a rise in grade could be a hazard to children playing in the backyard, lawn mowers or anything of that nature. The requirement to add a six square inch marker attached to the manhole cover with all that information is adding cost to the construction of the system and it clearly is not necessary. In other locations in this code, it is required that the administrative authority keeps a record of all the systems and this should be in a data base at the Municipal or County Health Departments. Putting this same information into the septic tank at is not necessary. (27)

RESPONSE: The basis for the requirement to extend manhole covers to finished grade is provided in the proposal at 43 N.J.R. 501. The requirement that risers be constructed and maintained at grade and labeled, will provide professional service personnel and homeowners with the exact location of the septic tank access and an easy and direct means to access the system for maintenance. This amendment is consistent with EPA's Onsite Wastewater Treatment Systems Manual (EPA/625/R-00/008), which also recommends that all septic tank manhole risers be installed to grade. See the Response to Comment 163 for further information regarding system labeling.

172. COMMENT: Who is supposed to perform the watertightness test required at N.J.A.C. 7:9A-8.2(m)? Who signs off on test results to certify the test was done in accordance with ASTM C-1227? (7)

RESPONSE: While the Department does not specify who is required to perform watertightness testing, it is anticipated that most administrative authorities will want the testing certified by a licensed New Jersey Professional Engineer, similar to the requirements for verifying compaction of fill material in a disposal field where soil has been replaced. However, if an administrative authority believes they are qualified to witness that testing to ensure that it was adequately performed; the Department would not object to that allowance.

173. COMMENT: N.J.A.C. 7:9A-8.2(m) must address watertightness with regards to system design as opposed to the current recommendation that is actually to a point that mimics system failure. Testing to the outlet, especially on repairs, allows for the immediate use of the tank. Testing beyond that requires testing events that must be coordinated with the administrative authority and will end up, in some cases, adding large additional costs for the homeowner. And a passing test will not mean benefit to the environment. As an example, if a tank on an existing system fails, once it has been replaced the homeowner would not be allowed to use the system until such time as the authority had inspected the tank. On a vacuum test, if the inspector fails to show for whatever reason, then a homeowner might be displaced for several days since they couldn't live in the house without an approved system. Testing to failure also requires that the

outlet and inlet be blocked so that no use could occur until the system was tested. As far as extensions to grade, given enough head pressure, all will fail. Accordingly, the true test would be once the system is back filled to determine if there is water penetrating the extension in a rain event. Since a tank in use will fill above the outlet only if the disposal system fails, then if one is trying to create a situation were liquid effluent does not escape the system when it has failed, how will the State propose to stop the effluent from coming to grade as it exits the disposal field? (11)

RESPONSE: Testing tanks for watertightness to the level of the highest seam in a riser (either using hydrostatic or vacuum methods) is imperative to ensure a properly functioning system is installed. Testing only performed to the level of the top of the outlet does not evaluate potential infiltration of stormwater or groundwater into the tank. Both types of infiltration can significantly impact the functioning of the septic tank to the point of complete system failure by hydraulic overload. The reference tests are nationally recognized and certified methods for testing septic tanks which are recommended by the EPA and are not unique to New Jersey.

See the Response to Comment 172 regarding who can certify or otherwise witness these tests, with respect to the commenter's questions regarding administrative authority witnessing these tests.

The testing for watertightness is not intended to simulate a failing condition to see how the tank will behave in response to a malfunction in the system. As described at 43 N.J.R. 501, the purpose of the testing is to ensure that ground water cannot enter the tank, which will increase the hydraulic loading to the system. Additionally, the testing verifies that sewage

entering the tank does not leak out of the tank, which would allow insufficiently treated effluent to discharge to the environment.

174. COMMENT: The limiting term “backfilling” at N.J.A.C. 7:9A-8.2(m) should be replaced with the more flexible term “covering.” Tank manufacturers have designed tanks to be tested for watertightness considering backfill in place, and may choose to recommend that tanks be backfilled, but not covered, for purposes of testing for watertightness. (14)

RESPONSE: The Department acknowledges that different testing methods are appropriate depending upon the material used in manufacturing a tank. The Department believes that, where it is appropriate for the particular system, testing before backfilling to allow ready observation of any problems and to allow any necessary repairs to be made without excavating that could potentially exacerbate the problems is preferred. However, the Department also agrees that is the ultimate result of the test that is most important and has removed the requirement that the testing be done in all cases before backfilling. If a particular specified testing method includes any requirement with reference to whether backfilling or covering should occur before testing, that standard will govern. Accordingly, the Department has modified N.J.A.C. 7:9A-8.2(m) to delete the phrase “and before backfilling.

175. COMMENT: While it is agreed that septic tanks should be watertight, the manner in which it is proposed to test them will become onerous on homeowners in the State. Testing in place up to the full height of the riser and inspection ports is not practical, and it does not serve a pragmatic need for the environment. By design, a septic tank is sized to treat effluent at a level

far below the riser. The environmental concern is not to have untreated effluent enter the groundwater. The only way effluent will reach such proposed levels in the tank is if the treatment field is failing, or there is a blockage somewhere. If this occurs, it will not make much difference if the tank is watertight up to the riser. Additionally, if tanks are tested after they are placed in the ground and the tank fails even slightly, which can happen often if its required up to through the riser, there will mostly likely be litigation between the installer and the supplier of the tanks as to whose fault it is. It will be difficult to prove beyond a shadow of a doubt that the tank wasn't damaged at the plant, during transport, or when it was put in the hole. The homeowner will be caught in the middle of this mess. If the installer has to be responsible he will be passing on this additional cost for liability to the homeowner. Also, there is the issue of the volume of water required to test a tank. While 1,000 gallons is the minimum tank size required, many homes require larger tanks. How is it environmental to be wasting all of this water at every installation? So the logical choice is to have a water truck supply some reuse water, but then is the homeowner/installer going to need another permit such as NJPDES? This could lead to more permitting, regulation, and cost. Has there been scientific study performed as to the number of leaking septic tanks that are causing degradation of groundwater and water quality in the State? Otherwise these additional requirements are proposed at a cost with no backup. Installers and service people should be surveyed as to the number, or percentage of tanks they have seen that have been leaking. While it does occur, installers and service people the commenter knows say leaking tanks are infrequent. Homeowners who need to replace septic systems are already burdened by a very expensive outlay of capital that most usually do not have in available funds. These proposals for watertightness will only impose more of a hardship on them. It appears the need and/or benefit of this proposed rule change does not justify the cost on

the residents of the State. N.J.A.C. 7:9A-8.2 should be revised as follows: "Watertightness testing should only be required of the tank manufacturer to provide his/her certificate of testing at the plant to the administrative authority." At the most, if testing onsite is still a requirement, it should be done on the delivery truck prior to the tank being put in the hole. Most manufacturers of concrete tanks usually install it themselves when the site allows. Most installers do not abuse the tank when putting it in the ground. (16)

RESPONSE: The Department believes that homeowners having a new tank installed and the general public are entitled to a tank that is watertight not only at the time of manufacture or delivery, but also after installation. Absent this testing, it is not possible to be sure that the system is operating as designed and public health and the environment is protected. As discussed in the proposal at 43 N.J.R. 501, watertightness testing after installation is recommended in EPA's Onsite Wastewater Treatment Systems Manual (EPA/625/R-00/008) and the regulatory requirement that all tanks be watertight has existed in the rule since January 1, 1990. Testing the watertightness of the tank to the highest seam within a riser ensures that ground water or stormwater seeping into the ground does not have a pathway to enter the tank, a potential problem that can lead to hydraulic overload of the system. Regarding the use of reclaimed water requiring permitting, provided the facility generating the Reclaimed Water for Beneficial Reuse is permitted and properly documents the reuse activity as required by that NJPDES permit, no additional permitting is required for the individual site receiving the reuse water for the purposes of hydrostatically testing a tank.

176. COMMENT: Mandating a post-installation water test, using an estimated 1,200 to 1,700 gallons of water, depending on the tank size and riser height, would add considerable cost to an already expensive capital outlay for the homeowner. Additionally, the installation of test tees would be required to facilitate the insertion and removal of the test plugs. As the proposed rule change deals with well capacity and water from other sources, it clearly is overly burdensome to both the contractor and the homeowner. A requirement for the use of butyl sealant as a riser-to-tank transition would serve to more effectively water-proof the system. As this butyl sealant is flexible, minor bumping of the installed riser during backfill operations would not interrupt the sealing function, as opposed to the rigid mortar joint which would likely fail. This requirement would not add significant cost to the installation. (22)

RESPONSE: The importance of having an installed, watertight tank to protect human health and the environment is crucial as discussed in the Responses to Comments 173 and 175. The Department believes that the benefits to public health and the environment provided by assuring through this testing that the installed tank is watertight outweighs the additional costs of the testing. The Department has allowed the use of reclaimed water for beneficial reuse (RWBR) which can be made available by many NJPDES permitted wastewater treatment facilities throughout the State, to reduce this part of the cost of testing and conserve potable water, which is not necessary for this testing. Further, the Department does not limit testing of tanks to hydrostatic testing methods at N.J.A.C. 7:9A-8.2(m); additionally, this subsection allows the use of vacuum testing methods. The Department agrees that the seal between the tank and riser is important and a good seal is necessary for the tank to pass the watertightness testing. While a butyl sealant may be one option to provide such a seal, the Department does not believe that it is

the only sealant that may satisfy the watertight standard and believes that it is more appropriate to allow the septic system designer and installer to determine the most appropriate seal for the particular system.

177. COMMENT: Whereas paragraph N.J.A.C. 7:9A-8.2(m) specifies septic tanks be tested after installation, it appears condition 2 allows concrete tanks to not be tested. This exception would not have detected the leaking of concrete tanks after installation that we have witnessed during our testing. (20)

RESPONSE: N.J.A.C. 7:9A-8.2(m) requires all tanks be tested for watertightness. This requirement applies to all tanks, regardless of the material from which they are constructed. The numbered paragraphs that follow (m) specify how that testing is to be performed. With reference to paragraph (m)2, that paragraph specifies the testing method to be utilized for tanks other than concrete; it does not in anyway modify the requirement that concrete tanks be tested. Watertight testing procedures for concrete tanks are specified in N.J.A.C. 7:9A-8.2(m)1. These requirements are broken into separate paragraphs because testing of concrete tanks may be performed using one of two different methods, an American Standard Testing Method (ASTM) standard (C-1227) or testing standards developed by the National Pre-cast Concrete Association, while only the ASTM C-1227 method would be appropriate for non-concrete tanks.

178. COMMENT: Any test allowed for any type of tank should also be allowed for all other types of tanks regardless of the construction or material and said test should be approved by the manufacturer. (11)

RESPONSE: Since there are nationally recognized and accepted methods for testing concrete septic tanks, the Department believes it is appropriate to use those accepted standards. As indicated in N.J.A.C. 7:9A-8.2(m)1, one of the accepted methods for testing concrete septic tanks was developed by the National Pre-cast Concrete Association. The Department does not believe this test is appropriate for use in testing other tanks constructed of other materials. For tanks made of materials other than concrete, the rules provide that other hydrostatic or vacuum testing methods may be used if the method is approved by the tank manufacturer. It is anticipated that manufacturers who choose to develop tests will consider not only the ability of the test to demonstrate watertightness, but will also consider the safety and welfare of those conducting the test. In the absence of an established standard for testing tanks of other materials, the testing requirements are being adopted as proposed. The Department would welcome the development of industry standards for testing for tanks made of materials other than concrete.

179. COMMENT: N.J.A.C. 7:9A-8.2(m) should include a new paragraph 6 that would require tanks associated with repaired, altered or expanded systems to be tested for watertightness in conjunction with the repair, alteration or expansion. This is to ensure that in these cases the septic tank will be watertight at the time of any system repair, alteration or expansion. (14)

RESPONSE: The Department will explore this concept with the Advisory Committee for future rulemaking. Until a determination is made as to whether such an amendment to the rules is necessary and appropriate, any inspection of a system in need of repair or alteration should include an evaluation of the septic tank to determine if part of the reason the system requires repair or alteration is the presence of a leaking tank. If an administrative authority has evidence or reason to suspect that a tank is not structurally sound or otherwise suspects a tank is not watertight, it would be reasonable for that administrative authority to require watertightness testing of that tank. Reasons that may justify requiring that a watertightness test of an existing system could include substantial degradation of concrete, observed infiltration into the tank and liquid levels in a tank below the outlet invert elevation.

N.J.A.C. 7:9A-8.3 Advanced wastewater pretreatment components

180. COMMENT: In conjunction with the commenter's suggested changes at N.J.A.C. 7:9A-2.1 to the definition of "Advanced wastewater pretreatment device" to allow for devices that obtain certifications other than NSF/ANSI Standard 40 or 245 (see Comment 30), the commenter proposes changes throughout N.J.A.C. 7:9A-8.3 to acknowledge the acceptability of those other certifications. (3)

RESPONSE: As indicated in the Response to Comment 30, the suggested changes to the definition of "advanced wastewater pretreatment devices" are not being made.

181. COMMENT: The following should be added to proposed N.J.A.C. 7:9A-8.3: All advanced wastewater pretreatment devices shall provide an operational cost label on the outside of the control panel with an estimated monthly cost for operation as approved by the Department. The operational cost figure displayed on the label shall be the monthly cost based on the costs averaged over a 20 year period for electricity, all tank pumping, operation and maintenance contract, parts replacement and labor. (3)

RESPONSE: The purpose of this chapter is to protect human health and the environment by providing standards to properly design, install, operate and maintain onsite systems. Accordingly, the Department is not mandating that cost information be provided on a label. Since the chapter requires that all advanced wastewater pretreatment components bear the mark of NSF International and meet all of the NSF Standard 40 or 245 requirements, should NSF International modify its standards for these technologies to include such a label, that label would be required by this chapter.

182. COMMENT: A nitrogen model is offered for consideration for areas that may have nutrient reduction requirements. The model, entitled “Predicting Ground-Water Nitrate-Nitrogen Impacts” by Norman N. Hantzsche and E. John Finnemore, presents a simplified method of determining land use impacts of onsite systems for routine evaluation of existing and proposed development projects. (3)

RESPONSE: The Department appreciates being made aware of the submitted information as part of this rulemaking. The Department currently incorporates nutrient dilution models in a number of programs that the Department implements, including one addressed under this chapter at N.J.A.C.7:9A-3.18. The Department's existing models have been used for many years and the Department is satisfied that they produce accurate results. Accordingly, there are currently no efforts to revise or alter those models.

183. COMMENT: The phrase that indicates that an advanced wastewater pretreatment device can "be utilized in place of a septic tank" should be changed to read "incorporate a settling component into the device." The commenter indicates that it has recently heard that a jurisdiction outside of New Jersey is actually installing a pretreatment device with no settling component. This was a common practice 20 or more years ago and the failure rate of these systems was extremely high. The commenter knows of no device that would not need to incorporate settling before treatment in order to operate correctly. Further into this section, the Department talks about using NSF International (NSF) systems on higher flows and higher strength waste if the manufacturer certifies on a site-specific basis that the influent to the system will be "adequately treated to EPA secondary effluent standards." There are only a handful of systems that have a proven track record of being effective (both biologically and operationally) in treating high strength waste. There needs to be more than a calculation and the manufacturer's word that the system will do the job, especially in this economic environment. Since there are not as many individual homes being constructed, the market for commercial and high strength wastewater is being invaded by systems that have never been used before on these types of wastes. The treatment system must have a history of treating high strength waste in order for it to be a wise

investment for the public to use, as it will be another large investment to replace the unproven system when it becomes too costly to maintain or when the effluent it produces has destroyed the drain field area. There are options that could be taken to allow a system without a history to be used. There is a protocol being developed by the Environmental Technology Verification (ETV) Program of the USEPA for high strength waste verification that may be worth requiring in lieu of a good history. There is also a graduated approach with effluent monitoring required. The Department should evaluate the Piloting, Provisional and General Use approval system utilized by the State of Massachusetts as an alternative. The commenter generally has no issues with NSF certified units being used on wastes that do not involve elevated BOD's caused by grease or other food preparation activities, like office buildings. This section also talks about effluent filters being required with advanced wastewater pretreatment components. The effluent filter should not only be allowed to be relocated, but also not used at all if the manufacturer can produce EPA secondary effluent or better without it and therefore does not require or need it to be used. (4)

RESPONSE: The Department agrees that all onsite systems should include, as part of its design, a primary settling component. Primary settling, such as the use of a septic tank, must be incorporated into system designs that include an advanced wastewater pretreatment device. However, there are occasions where a smaller primary settling component (often referred to as a "trash tank") to settle out larger or denser materials, such as inorganic solids and floatables, is appropriate. Often times, these smaller primary settling tanks are incorporated into the advanced wastewater pretreatment device. Because of the importance of primary settling to the proper function of an advanced wastewater pretreatment device, to the Department's knowledge, NSF

International has not certified a NSF/ANSI Standard 40 device meeting the definition of "advanced wastewater pretreatment device" under this chapter that does not include a primary settling component. Further, the amendments at N.J.A.C. 7:9A-8.3(b)9 discuss the need for a septic tank, a form of primary settling, prior to any advanced wastewater pretreatment device. Since the Department is relying on the NSF International certification as discussed in the proposal at 43 N.J.R. 501-502, the Department will amend the first sentence at N.J.A.C. 7:9A-8.3(a) from, "The use of an advanced wastewater pretreatment device in lieu of or in addition to a septic tank may be allowed..." to, "The use of an advanced wastewater pretreatment device in addition to a septic tank, or in lieu of a septic tank provided a primary settling component is incorporated into the design, may be allowed..."

With regard to systems designed for high strength wastes, the Department will consider any nationally acceptable certification process that is established for technologies that treat for high strength wastes. Until such time as an appropriate standard is developed, the Department is not able to include such requirements.

While the Department acknowledges that the State of Massachusetts has developed its own system for reviewing and approving individual technologies, the Department made the decision to not develop its own program to review and approve technologies. The Department did not believe that it was necessary to require manufacturers incur the additional expense to get a State-specific approval for a technology that already that has obtained a nationally recognized certification that the Department believes is appropriate. The Department will maintain contact with administrative authorities to receive documentation of problems regarding high strength wastewater pretreatment devices and will include on its product listing (as described at N.J.A.C. 7:9A-8.3(a)) manufacturers and their technologies demonstrating the ability to properly engineer

and implement technologies capable of providing the necessary treatment of high strength wastewater identified at N.J.A.C. 7:9A-8.1(i). This listing, which will be available to the public on the Department's website, is intended to assist system designers, property owners and administrative authorities choose and approve appropriate technologies for the intended purpose, but does not represent an endorsement of any particular technology. Regarding effluent filters, if a manufacturer documents that an effluent filter should not be installed as part of the use of its system or may adversely affect the treatment capacity of its system, then an effluent filter will not be required as allowed by N.J.A.C. 7:9A-8.3(b)9.

184. COMMENT: Generally, the commenter is pleased by and supports the Department's recognition of advanced wastewater pretreatment devices, as they are relatively inexpensive products and have proven to be effective for the removal of nitrates. However, while the Department is not mandating alternative technologies be used, the commenter cautions that municipalities may seize the opportunity to mandate use of the more expensive advanced treatment design, without justifying why they are needed and that these systems will be placed on oversized lots. This foreseeable situation should be addressed by the Department. (9)

RESPONSE: N.J.S.A. 58:11-25 specifically allows for administrative authorities to adopt ordinances that are stricter than what is required by the State minimum standards. It is also important to recognize that there are many regional conditions that exist that preclude the use of a system that only meets the State minimum standard and therefore a more advanced system would be appropriate for a particular application.

185. COMMENT: The commenters suggest a particular peat moss filter product should be listed as an advanced wastewater pretreatment component in the proposed readoption either through "grandfathering" as it is currently listed by the Department on its website (http://www.nj.gov/dep/dwq/owm_ia.htm) as an applicable product under the Peat Biofilter Wastewater Treatment Systems Guidance Document for altering existing malfunctioning systems. In order to be on that list, the product has undergone previous scrutiny by the Department that demonstrates it qualifies as an advanced wastewater pretreatment component. The distributor of these devices since 2005 has built a business that is based in part on the authorization given to the manufacturer of this technology by the NJDEP in 2003; has built a solid certification program for designers and installers; and has worked to meet all requirements of the Department's guidance. There are systems currently operating throughout New Jersey, on 119 properties, using 130 units and they are serving their owners well while protecting the groundwater in a number of difficult sites. It is not argued that it is within the authority of the NJDEP to require that all new alternative technology be proven by requiring certification through NSF, from this date forward. However, it does not make sense to shut down a viable wastewater treatment program that has been operating for six years, simply because of the manufacturer's choice not to pay for NSF certification when test results have been presented that prove effluent quality that is as good as or better than secondary treatment standards. Few companies have the financial resources to pay the fees required by NSF every time there is any change to the technology. Strict enforcement of NSF certification requirements for all alternative technologies will cause many newer technologies to be unaffordable and some may be pushed out of business. (5, 17)

RESPONSE: The Department acknowledges that advanced wastewater pretreatment technologies have been listed by it in previous guidance that would no longer be authorized by this chapter. Those units already installed would be considered "grandfathered" and, provided they are continued to be maintained in accordance with the requirements of the chapter, may continue to operate as they currently are installed. However, only those units bearing the mark of NSF Standard 40 would be considered conforming to the chapter in future installations unless a treatment works approval has been issued for the proposed design pursuant to N.J.A.C. 7:9A-3.9. This standard is required because it includes wastewater treatment effectiveness testing to validate the treatment capacity of the components as well as establishing operation and maintenance requirements for the use of the products. It additionally includes auditing of the manufacturing process to ensure the products are consistently produced and ongoing certification requirements that could not be ensured through other certification processes.

Since all units will be required to bear the NSF mark, it would be simple enough for authorities to check the product at time of installation. The authority could also check the NSF International, Inc. website for the most up-to-date NSF Standard 40 listings at http://www.nsf.org/Certified/Wastewater/Listings.asp?TradeName=&Standard=040 to ensure the unit is appropriate. As a final check, the administrative authority could also require the as-built plans to certify that the installation conforms to the requirements of the technology’s NSF certification or require a separate certification from the manufacturer, or its authorized agent, that the installation conforms with that certification.

186. COMMENT: N.J.A.C. 7:9A-8.3(b)1 indicates that advanced wastewater pretreatment components require that the designer certify on the plans or in the application that they are sufficiently knowledgeable of the specific technology(ies) they are proposing as part of the design. Since these technologies are relatively new in the State for general use, it is necessary to assure that professional engineers are adequately knowledgeable about the specifics of each and every proprietary technology with which they design. This requirement is redundant since N.J.A.C. 13:40-8.1, the Regulations of the State Board of Professional Engineers and Land Surveyors already denote that a Professional Engineer's signature and seal on the plans and/or application to the Department is certifying that the Professional Engineer is competent, is sufficiently knowledgeable of the design, and has rendered regular and effective supervision for the design. This requirement is redundant, not required by current regulations, and will not add any further value to the plans or application and should be removed. (23)

RESPONSE: The Department has included this provision because of the potential for significant differences between some of the proprietary systems. The Department believes that it is important to reinforce that the septic system designer must not simply be proficient and knowledgeable in the design of the onsite system in general, but in the particular technology utilized to assure that misunderstanding of that obligation does not lead to malfunctioning systems resulting from inappropriate design.

187. COMMENT: N.J.A.C. 7:9A-8.3 is very good as it allows a septic system designer another alternative. (27)

RESPONSE: The Department acknowledges the support for this provision.

188. COMMENT: There is a typo at N.J.A.C. 7:9A-8.3(a)2. The term should be “up-to-date”. (18)

RESPONSE: The Department has made this change on adoption.

189. COMMENT: There is a typo at N.J.A.C. 7:9A-8.3(b)6i. The term should be “internet-based”. (18)

RESPONSE: The Department has made this change on adoption.

190. COMMENT: There are typos at N.J.A.C. 7:9A-8.3(b)8 and (c)5. The terms should be “watertight” and “watertightness”. (18)

RESPONSE: The Department agrees to change the terms “watertight” and “watertightness” to single words to maintain consistency with the existing rule text’s use of the term at N.J.A.C. 7:9A-8.2(e). Additionally, the same change is being made throughout N.J.A.C. 7:9A-8.2(m) to ensure consistency throughout the chapter.

191. COMMENT: The Department should include a requirement for a septic tank prior to all advanced wastewater pretreatment devices at N.J.A.C. 7:9A-8.3(b)9. (18)

RESPONSE: See the Response to Comment 183. The Department is amending the rule text at N.J.A.C. 7:9A-8.3(a) to clarify that primary settling is a required part of all advanced wastewater pretreatment devices, but not specifically a septic tank. While it is important that primary settling be incorporated into all system designs that incorporate an advanced wastewater pretreatment device, a septic tank sized in accordance with N.J.A.C. 7:9A-8.2 may create a problem with the system's ability to fully treat the wastewater. Certain NSF certified systems need fine organic material as a food source for the aerobic bacteria in their systems, which are settled into the organic solids in a fully sized septic tank, therefore starving the bacteria that provide the treatment. A smaller primary settling component will still be able to settle out the heavier solids, like inorganic solids and floatables, while allowing an appropriate volume of organic solids to enter the advanced wastewater pretreatement device. Since the Department is relying on the NSF International certification as discussed in the proposal at 43 N.J.R. 501-502, this change to enable systems to comply with that certification is not considered substantial to require reproposal of the condition.

N.J.A.C. 7:9A-9.8 Products in lieu of laterals and/or filter material

192. COMMENT: The commenter indicates that it is good to see there are additional options to the septic designs under N.J.A.C. 7:9A-9.8. (27)

RESPONSE: The Department acknowledges the support for this provision.

193. COMMENT: There is a typo at N.J.A.C. 7:9A-9.8(a)2. The term should be “up-to-date”. (18)

RESPONSE: The Department has made this change on adoption.

194. COMMENT: A new N.J.A.C. 7:9A-9.8(a)5 should be added that would require product manufacturers to provide the Department with a current list of certified installers for their products. This will encourage manufacturers to certify product installers by educating them on the proper use and limitations of these products. (14)

RESPONSE: The Department does not currently have the resources to properly review and verify lists of certified installers at this time. N.J.A.C. 7:9A-9.8(b) requires that authorized installers must provide the administrative authority or Department with a means to verify credentials of individual installers upon request. If the Department had the need for a list of all authorized installers by a particular manufacturer, the Department would anticipate working with the manufacturers voluntarily as has occurred in the past.

N.J.A.C. 7:9A-10.1 General design requirements for disposal fields

195. COMMENT: While not specifically addressed in these rules, the Highlands Preservation Area Rules prohibit the removal of in situ material and to be replaced by more permeable material, that is, select fill. This should be addressed in these rules and taken out of the Highlands Preservation Area Rules. The installation of more permeable material never makes a site suitable that was not suitable before. However, it will extend the life of a system and provide for better treatment of the effluent. Why does it make any sense to mandate poor design? (8)

RESPONSE: N.J.A.C. 7:9A applies Statewide and does include many onsite system design options that allow for soil replacement with select fill material throughout Subchapter 10. Removal of a condition from the Highlands Preservation Area rules, which are specific to that geographic area, is beyond the scope of this rulemaking.

196. COMMENT: N.J.A.C. 7:9A-10.1(e)3 is not clear and is confusing. (7)

RESPONSE: The commenter did not specify what was unclear and confusing about this provision. As described at 43 N.J.R. 504, N.J.A.C. 7:9A-10.1(e)3 allows for a 25 percent reduction in the area required for a zone of disposal in certain circumstances. In order to qualify for this potential reduction, several conditions must be found to be present. First, the identified zone of disposal must be shown to have a permeability rate of two inches per hour or faster, or a basin flooding test must demonstrate that the basin drains in less than three hours during each of the required filling stages. The results of a percolation test cannot be used to make this

determination. Instead, any of the other tests allowed under N.J.A.C. 7:9A-6 should be used to establish permeability sufficient to allow for the reduction of the zone of disposal. Second, there cannot be a perched zone of saturation or, if a perched zone of saturation exists, interceptor trench(es) sufficient to address this condition must be proposed in the application to the administrative authority. If these conditions are satisfied, the administrative authority may allow the 25 percent reduction in the area required for the zone of disposal. The remainder of the paragraph requires that the geometry of the reduction provide for positive drainage of effluent from the zone of treatment to the zone of disposal. Therefore, the transition from the bottom of the zone of treatment must be sloped to allow effluent to flow to the zone of disposal, rather than creating a shelf where effluent might stagnate at the transition or within the zone of treatment.

197. COMMENT: What does “this determination” refer to at N.J.A.C. 7:9A-10.1(e)3? If, by chance, “this determination” refers to the permeability of the disposal zone, eliminating the percolation test is not founded and this sentence should be removed. With the revamping of the rule in 1989, substantial detail was added on how to run a percolation test. This was to pointedly address the claim of problems with reproducibility of test results. The methodology to run the test includes two categories of soil textures. This test should not be omitted; the percolation test should be allowed. Should the Department request it, the commenter indicates research data is available to support this request. Especially given that the bulk density of a tube permeameter sample of fill material is typically unknown, the reliability of percolation test results is no worse than tube permeameter test results. A percolation test, because it is done in-situ, is therefore advantageous on this aspect, compared to the tube permeameter test. (18)

RESPONSE: The term “this determination” in N.J.A.C. 7:9A-10.1(e)3 regarding the establishment of the permeability of the zone of disposal refers to the permeability test being conducted in the zone of disposal. The reason a percolation test has been excluded from making this deterimination is based on data reviewed by the statutory Advisory Committee. The Committee concluded that a reduction up to 25 percent in the area required for the zone of disposal was appropriate based upon data limited to permeability analyses. Because a percolation test provides a percolation rate rather than permeability information, the Committee excluded the percolation test as a method to verify the permeability of the zone of disposal to allow for this reduction. However, use of percolation tests to determine the acceptability of the zone of disposal, without a corresponding reduction in the area required for the zone of disposal, is still allowed under the rules.

198. COMMENT: There are standards proposed that will allow the reduction in size of the zone of disposal while keeping the zone of treatment the normal size. This may be an effort to try to reduce the cost of a system related to the prohibition of bank run, but it is entirely impractical to construct a system in this manner. There is no harm in keeping it in the rule, however it is unlikely that systems will be constructed in this manner. The cost increases associated with the prohibition of bank run at N.J.A.C. 7:9A-10.1(f)6 will have to be borne by system owners. (8)

RESPONSE: The use of bank run material has not been allowed by the chapter since 1990. Since that time, all fill material used within a disposal bed has been required to meet criteria

listed in N.J.A.C. 7:9A-10.1(f). The amendment to the rule at N.J.A.C. 7:9A-10.1(f)6 continues the requirement by clarifying that plans must specify fill material to be used without using the term "bank run."

199. COMMENT: At N.J.A.C. 7:9A-10.1(f)4, the smallest fraction passing the No. 100 sieve includes sizes as large as fine sand. Although the Department is commended on responding to the availability of materials, the effectiveness of this gradation in providing treatment of effluent is questionable. This gradation includes soil textures that are sand only and have no silt or clay. Out of concern for water quality and to provide for adequate treatment, the minimum silt content should not be removed from this specification. (18)

RESPONSE: When the Department developed the alternative fill specification for the rule proposal in 1999, a survey was conducted of various state regulations that had provisions for soil replacement or sand mounds throughout the country (28 states in total). The specification provided for in the generic treatment works approval 03-3487-4SG and in the rule were the most common. Further, literature reviews provided very little information regarding the effectiveness of treatment due to the presence of fine particles in the fill. Most studies focus on sand filter technologies, most of which provided no information on the sand fill material or used material meeting the ASTM-C33 specifications. Therefore, with inadequate supporting data showing that material containing fine particles is substantially more effective in treating wastewater than ASTM-C33 aggregate or the specification provided in the rule, the Department is not amending the rule upon adoption.

200. COMMENT: The requirement for course fragments should remain at 25 percent. (27)

RESPONSE: As discussed at 43 N.J.R. 505, the Department is making this change to narrow the specification slightly by restricting the amount of excessively coarse materials that could be present in this type of fill material that includes materials like bank run, which the Department has advised against in its published guidance due to the poor and erratic sorting that occurs within this type of material. This restriction also avoids problems associated with placing a finer material over a coarser material, where inevitable settling of the materials can cause preferential or problematic structures within the layer of contact between the two differing material types.

201. COMMENT: Textural analysis is now being limited to just sieve analysis as opposed to other testing. This requirement takes away from the designer's the ability to specify how the testing of fill material in the zone of treatment is to be accomplished. Septic system designers should have the ability to specify either a sieve analysis or a permeability class rating test as previously allowed. (27)

RESPONSE: Sieve analysis has been required at N.J.A.C. 7:9A-10.1(f), although the use of the permeability class rating test was previously allowed to confirm the permeability of installed fill material at N.J.A.C. 7:9A-6.1(a). Now this method of permeability testing to confirm the permeability of fill material is limited to a percolation test or tube permeameter test at N.J.A.C.

7:9A-6.1. However the tests to confirm the permeability of fill material were never intended to determine compliance with the specification of the fill material in accordance with the requirements at N.J.A.C. 7:9A-10.1(f), but rather to ensure proper installation of the fill material. Improper compaction techniques can inhibit the flow of effluent through the zone of treatment and into the zone of disposal, which often results in system malfunction.

202. COMMENT: The requirement for the use of trenches on slopes in excess of 10 percent is not sound design. The rules should still permit the re-grading of the site to less than 10 percent for the installation of a bed. Trenches, by their nature, require substantially greater land area to construct. They are far more difficult to construct to get consistent compaction. They are more difficult to construct to get even distribution. One commenter believes that trench systems are far more likely to fail than beds and this has been seen in that commenter's experience over the last 20 years. The only reason that there are not a large number of trench failures reported is that design engineers have been avoiding the use of trenches for the reasons outlined above. It is not good environmental management to require the design of systems that are more likely to fail. (8, 28)

RESPONSE: The use of trenches in a State where land prices are at a premium is typically limited due to the amount of land area that is required for their installation. Published literature and studies demonstrate that the use of trenches have advantages over bed designs due to the geometry of the infiltrative surface. Trenches, which are long and thin, typically have less excessive biomat formations when compared to bed designs, which are typically shorter and

wider in shape, are prone to go anoxic at the center of the bed where less oxygen exchange between native soils and the disposal system can occur due to the greater distance between the native soils and center of a disposal bed. When narrow trenches are used, the diffusion of oxygen through the soil is greater due to the presence of greater native soil surface area around each trench when compared to the entirety of a bed where oxygen diffusion rates tend to be low. Also, the use of narrower trenches on sloping sites is encouraged to help keep the infiltrative surface level. While there has been a prolific use of beds throughout the State due to high land cost, failures due to poor construction techniques or designs intended to limit the land area used for sewerage disposal so that the area can be dedicated to realty improvements are avoidable problems the industry professionals need to work towards resolving. While the use of trenches is a better method of wastewater treatment and disposal when compared to beds, the ability to regrade sites where the existing ground surface is between 10 and 25 percent has not changed. The change being adopted at this time clarifies the previously existing rule requirements that, when the existing ground surface is greater than 25 percent, there is no acceptable design standard allowed by an administrative authority, with or without regrading, unless a treatment works approval has been issued by the Department.

N.J.A.C. 7:9A-10.2 Disposal field sizing requirements

203. COMMENT: On Table 2, there appears to be a typo under the title Percolation Rates. Why include "<"? As written, for example, 14 min./inch could qualify for any category. Is that what you are intending? (18)

RESPONSE: Yes, the Department would allow a slower percolation rate to be applied to the criterion for a faster percolation rate category. The commenter's example of a percolation rate of 14 min./in. would be within the <3-15 min./in. rate range, however the commenter is correct that 14 min./in. would also be included within the range of all of the other slower criteria in that column in Table 10.2(b). However, the percolation rate criteria in Table 10.2(b) relate to the minimum trench length requirements of N.J.A.C. 7:9A-10. A percolation rate of 14 min./in. noted by the commenter would allow for the smallest trench length permitted by the rule. If the septic system designer wanted to provide for a greater factor of safety, additional trench length may be proposed in any circumstance. It should be noted that the capacity of any system proposed for approval under this chapter should not exceed the limitations at N.J.A.C. 7:9A-1.8.

204. COMMENT: In Table 10.2(e), the first column heading appears to have a typo. This is very specific terminology from a paper from Hantzsche et al, Soil Permeability Class Rating (18)

RESPONSE: It is unclear from the comment what the typographical error in Table 10.2(e) is being pointed out by the commenter. The soil permeability class rating values are used in evaluation of soil tests in Subchapter 6 (see N.J.A.C. 7:9A-6.2(i)). The information generated in Subchapter 6 is used to determine the size of the disposal field using the criteria in N.J.A.C. 7:9A-10.2. The intention was to draw a connection between these values and the sizing criteria. However, as soil permeability class ratings have already been considered during the permeability determinations in Subchapter 6 and are not part of the calculation to determine the minimum size of the disposal field, repeating the column in Table 10.2(e) was unnecessary. While the

Department is unable to determine that there is a typographical error, the comment highlights the potential for confusion and that the column is extraneous. Therefore, the column has been deleted.

N.J.A.C. 7:9A-10.3 Specific requirements for conventional disposal field installations

205. COMMENT: Salt hay, straw, and untreated building paper can, and do, still function as needed for the intended purpose. Whether or not these materials are used has been up to the contractor, usually based on availability and cost. Local availability can indeed keep installation cost lower. These materials are still quite viable and it should be left up to the designer or installer whether to use them. The use of these items should remain a permissible option. In addition, the use of fabric or geotextile without designing the apparent opening size (AOS) of the geotextile can create other problems. Without designing the AOS of a geotextile for the soil texture which will be adjacent to the fabric, there is no assurance that soil water movement will be enhanced, rather than stymied. For example, if the geotextile has a higher proportion of small openings and the soil a higher proportion of large pores, the fabric could potentially restrict water flow through it, effectively damming up water in the soil. The commenter has already observed sites where “landscaping fabric” or other, unspecified geotextile was placed horizontally on the top of the gravel, purportedly to separate it from the overlying soil and topsoil. In at least two locations, after four years, the ground surface above the fabric continues to subside. (18)

RESPONSE: The Department does not believe that continued use of salt-hay straw or building paper is appropriate. These products, no longer widely used in favor of geotextile materials, tend

to degrade within a few years of installation and do not provide the long term protection of gravel filter material in the disposal area from fine sediments migrating through these products from the overlying topsoil. While the Department agrees that the AOS of the geotextile is an important factor in determining the appropriate product in a system design, N.J.A.C.7:9A-10.3(e)3ii. requires that, "Drainage fabric shall be specified in the engineering design and shall have adequate tensile strength to prevent ripping during installation and backfilling, adequate air permeability to allow free passage of gases, and adequate particle retention to prevent downward migration of soil particles into the filter material." Problems with water flow have not previously been reported to the Department and therefore this rulemaking did not address this issue. If the commenter wishes to present information or documentation regarding the movement of water through drainage fabric used in onsite system construction, the Department is willing to review that information or documentation as part of future rulemaking and, in the interim, advise onsite industry professionals of this issue. The Department can use its website to post those types of issues, for example in its Frequently Asked Questions document, and through e-mail advisories to various health departments and private citizens that have registered to receive program advisories.

N.J.A.C. 7:9A-10.5 Specific requirements for mounded disposal field installations

206. COMMENT: Given that a block wall is typically designed with free drainage behind the wall, has it been evaluated for water quality, that this could, in effect, behave like a fill-enclosed, soil replacement system, except that the enclosing “fill” (drain material) drains but does not treat? (18)

RESPONSE: Assuming the commenter is asking if any water quality studies have been conducted to determine the impact of an effluent discharge on a drain behind a block wall, the Department is unaware of any water quality studies involving drainage behind a block wall. However, since these drains are considered a water course under the existing code, at N.J.A.C. 7:9A-4.3 Table 4.3 and would require a 50 foot separation distance between the drain and the disposal area, use of a block wall with a drain to satisfy the requirements of a retaining wall at N.J.A.C. 7:9A-10.5(e)5 would be impractical.

207. COMMENT: The proposed language at N.J.A.C. 7:9A-10.5(e)5i. should be amended to require that retaining wall stability also be sufficient to withstand lateral earth pressures. Additionally N.J.A.C. 7:9A-10.5(e)5iv, v, and vi should be amended to permit the retaining wall to be designed, inspected and certified by a New Jersey licensed professional engineer, other than a “septic system designer.” This would address those cases where the septic system designer subcontracts the services of a geotechnical, structural, or civil engineer for retaining wall purposes, who does not engage in the practice of septic system design. (25)

RESPONSE: The Department agrees that it is not necessary for a licensed engineer designing a retaining wall to be one who prepares engineering plans and specifications for the construction or alteration of individual subsurface sewage disposal systems if that engineer is only designing and overseeing construction of the retaining wall. Accordingly, the Department has amended

N.J.A.C. 7:9A-10.5(e)5iv, v and vi to replace the term "septic system designer" with "New Jersey licensed professional engineer."

208. COMMENT: The as-built plan that has been prepared showing the retaining wall distance to the property line must be signed by a professional land surveyor. (27)

RESPONSE: See the Response to Comment 70.

N.J.A.C. 7:9A-10.8 Specific requirements for drip dispersal

209. COMMENT: Many of the proposed changes at N.J.A.C. 7:9A-10.8 relate to two types of systems. It seems that the changes are related to a strong lobbying effort on the part of the manufacturers of these systems. While it is worthwhile to address these systems, the percentage of systems constructed using these proprietary systems is very low. They are far more likely to be used for systems in excess of 2,000 gallons per day and those are beyond the scope of N.J.A.C. 7:9A. (8)

RESPONSE: Currently, the percentage of onsite systems using drip dispersal technology is very low. However, it has been reported to the Department that there is an increase in the number of systems in use in the State that utilize drip dispersal technology since the issuance of guidance regarding the use of drip dispersal technology in 2008 (available at: http://www.state.nj.us/dep/dwq/pdf/NJ_Drip_Guide_01_08.pdf) for altering existing,

malfunctioning systems The Department believes that the technology is appropriate for use in New Jersey and that providing rules to allow for the general use of drip dispersal systems will provide property owners in the State with the oppurtunity to take advantage of the benefits of drip dispersal technology in an appropriate manner.

210. COMMENT: The proposed rule language at N.J.A.C. 7:9A-10.8(b)4 refers to permeability testing for drip dispersal systems and indicates the performance of percolation tests “whenever possible” to determine the permeability of the horizon in which drip tubing is to be installed. This leads one to believe that permeability testing such as tube permeameter tests could be conducted to determine the permeability. However, N.J.A.C. 7:9A-10.8 Table 10.8, which is utilized for the sizing of the drip dispersal area, is based on percolation rates exclusively. Please clarify whether tube permeameter tests are acceptable for determining the permeability rate for drip dispersal systems. If tube permeameter tests are acceptable, the sizing criteria based on permeability rates reported in inches per hour (in/hr) should be added to Table 10.8. (2)

RESPONSE: The Department worked with the various manufacturers and system integrators to develop the rule language. The consensus was that in-situ percolation tests are a necessary and prudent test to properly design these systems. Therefore, while other permeability tests like the tube permeameter test can be used to further investigate soil conditions and supplement design data, percolation testing will be required as part of the design for a drip dispersal system as identified at N.J.A.C. 7:9A-10.8(b)4.

N.J.A.C. 7:9A-12.2 System maintenance

211. COMMENT: The issue of a Statewide, comprehensive, individual subsurface sewage disposal system maintenance program is still for the most part a dream of regulators in Trenton and New Lisbon. The Water Quality Management Rules that went into effect in July 2008 (N.J.A.C. 7:15-5.25) have had little impact Statewide on septic maintenance for numerous reasons. One would only have to refer back to the rules and see the issue was addressed in a mere two sentences out of 100 pages of adopted Water Quality Planning regulations. NJDEP staff responded to public comments that the program would be no more complicated than a "simple spreadsheet.'" NJDEP staff also had interpreted the new septic maintenance rules (N.J.A.C. 7:15-5.25(e)) to include existing structures as well as new construction. Somehow this little fact was left out of the rule itself. This "interpretation" now affects tens of thousands of existing systems. The rule did not indicate which agency was to be the administrative authority for "overseeing" septic maintenance but left it to the locals to sort it out. Three years later, NJDEP comes out with this proposed readoption with amendments and does no more than refer all parties involved back to two sentences in the Water Quality Management Rules from 2008. Is the State any better off three years later with regards to septic maintenance? Where is the report that has documented an increase in surface and groundwater pollution from the lack of septic system maintenance? Where are all of the County and Municipal WQM Plans that are suppose to have addressed this issue complete with local ordinances? Once again the NJDEP has failed to quantify and qualify why the government (County, Municipal, local Authority, etc.) should monitor the operation of an Individual Subsurface Sewage Disposal System for eternity or until the property is connected to a public sewer. No one has discussed the true costs to inventory existing systems. No one has mentioned locating older systems that still service farms,

parks, churches, gun clubs, non-profits, Federal property, etc. No discussion on true staff costs to mail out notices and manage reports submitted by the public. No discussion of time and costs associated with enforcement actions that now may include attorneys, judges and court clerks. No scientific evidence that explains how a malfunctioning system increases pollution of surface water and groundwater. We can all agree though, lack of maintenance will cost the property owner a lot of money. A comprehensive government monitored Statewide septic maintenance program will also cost a lot of money and the benefits of such a program may be impossible or impractical to measure. All references to septic maintenance should be removed from proposal except for alternate designs and TWA systems. The rule should just recommend that proper maintenance will extend the life of the system. Health departments and the NJDEP can post septic system maintenance documents on their respective websites and the public should be given written guidance and recommendations at the time of permitting. Future discussions on septic maintenance should start with educating, testing and licensing companies that are in the business of septic inspections. Engineers, plumbers, registered environmental health specialists and real estate agents are all State licensed. These septic inspectors should also be State licensed. (7)

RESPONSE: There are many documented enforcement cases where malfunctioning septic systems have created water quality problems and concerns to public health, which is why the Department has been actively promoting septic maintenance throughout the State in its outreach programs, publications and web content. This information, when provided to a homeowner, should help to avoid many potential septic problems due to a lack of or improper maintenance. While there are no specific New Jersey Statewide reports on the impact of failing septic systems,

there are national reports that document the problem. One example is the "Voluntary National Guideline for Management of Onsite and Clustered (decentralized) Waste Water Systems, EPA 832-B-03-001, March 2003. Therefore the Department believes all references to system maintenance are appropriate and is not removing references to septic maintenance as suggested by the commenter.

The deadline for the County and Local Wastewater Management Plans (WMPs) has been extended by recently adopted legislation (P.L. 2011, c. 203). Therefore, the countywide WMPs and the data they will provide have not yet been generated pursuant to the WMP rules (N.J.A.C. 7:15).

While this chapter does not require specific septic system maintenance provisions, except for those systems that incorporate advanced wastewater pretreatment, the rules do include educational requirements for proper system maintenance at N.J.A.C. 7:9A-3.14. However, programs to require maintenance that exist now or are required in the future through adopted WMPs, or adopted locally by ordinance will be further supported by this rule provision and support their enforceability. See the Response to Comment 9 with regard to licensing onsite system inspectors.

212. COMMENT: Maintenance monitoring will require additional time and cause a financial burden on administrative authorities in this time of cutback and hiring freezes. The system owner should not be allowed to do any maintenance, except of the simplest type, such as treatment tank pump outs, and checking inspection ports liquid levels. (7)

RESPONSE: The Department is encouraging administrative authorities to evaluate the types and amounts of each assessed fee to ensure they are appropriate to fully support health department's efforts in implementing the rules. While the rules do not prohibit a homeowner from performing maintenance on their system, the Department suggests, in "A Homeowner's Guide to Septic Systems" available at: http://www.state.nj.us/dep/dwq/pdf/septicmn.pdf, that appropriately trained maintenance providers provide service for onsite systems. There is nothing in this rule that prevents homeowners from receiving appropriate training and credentials to perform service on their system. However, due to the dangers of exposure to raw and partially treated sewage, the presence of methane and hydrogen sulfide gasses, and other confined space entry concerns, the Department discourages homeowners from maintaining their own system.

N.J.A.C. 7:9A-12.3 Maintenance and monitoring requirements for systems incorporating advanced wastewater pretreatment devices

213. COMMENT: Service frequency should be based on a risk assessment model. A sample model that establishes an estimated monthly cost for operation of the advanced wastewater pretreatment device as approved by the Department is provided. The operational cost figure displayed on the label should be the monthly cost based on the costs averaged over a 20 year period for electricity, all tank pumpings, operation and maintenance contract, parts replacement and labor. (3)

RESPONSE: The Department is interested in exploring the concept of establishing service frequencies, as well as other maintenance requirements, based upon a risk-based approach, but is not prepared to do so as part of this rulemaking. Additional resources would need to be dedicated to the assessment of this, as well as soliciting feedback from members of the statutory Advisory Committee on the issue.

214. COMMENT: N.J.A.C. 7:9A-12.3 is requiring the administrative authority to monitor the maintenance of systems incorporating advanced wastewater pretreatment devices. This is an undue burden on local health departments and is another unfunded mandate. If just one of the many requirements listed in this section are not followed by the owner or authorized service provider, is the expectation of the NJDEP that the administrative authority will take enforcement actions? This would place an undue financial burden on local health departments. (7)

RESPONSE: Appropriate funding for these programs will be recovered through proper fee assessments on individuals that install and operate all onsite wastewater treatment systems.

Regarding the enforcement of provisions related to the monitoring and maintenance of advanced wastewater pretreatment units, the Department expects that any administrative authority that becomes aware of, or is notified of, any non-compliance issue related to the rule requirements or an approval issued by that administrative authority, will take whatever enforcement action is necessary to correct the non-compliance.

N.J.A.C. 7:9A-12.6 System inspection protocol for inspections conducted during real property transfer

215. COMMENT: Is there a law or rule that requires a seller or buyer of real estate to have a "Department recognized" septic inspection performed during the sale process? If so, how is this new rule going to be implemented during the real estate transaction process? What government agency sits at the table at property settlements? If these rules are not followed, does the administrative authority go after the former owner, current owner, real estate agents, lending institutions, attorneys, title company agents, septic inspector, etc.? What about HUD properties and other properties that are sold "as is" with no warranties? What about properties sold between family members or property left in a will to someone? Lastly, reporting of all information found during real estate transaction to the administrative authority will require additional staff time to not only review information, but also take any administrative action based on non-compliance of the rules, which may be an unfunded mandate. If there is no law or rule requiring such an inspection during a real estate transaction, the requirement should not be adopted. The rule as written is unenforceable at best and leaves the administrative authority in a precarious position during and after the sale of real estate. If the rule text is the recommendation of the NJDEP, it should be posted on the State website as such and used as guidance and not part of the rules. Is there an ASTM standard that could be followed for these types of transactions that banks and other lending institutions could rely on to make sure a system is functioning properly at the time of sale? N.J.S.A. 58-11-23 governs sewerage facilities for realty improvements (in other words, new construction) and when changes are made to a realty improvement that may affect an existing approved system (that is, change of use, additions, alterations, etc.). The commenter does not believe the Act empowers the NJDEP to make rules

that affect properties that are only the subject of a transfer of title. The Department should amend Title 58 under the RISF Act to include a new law that requires all properties sold in New Jersey that are served by a system be inspected by a NJDEP licensed septic system inspector. Without this law, the NJDEP is adopting rules that are unenforceable. Amending Title 58 would be the best way to protect potential buyers of real estate served by a system. (7)

RESPONSE: N.J.A.C. 7:9A-12.6 sets forth the Department's recognized method of inspections of septic systems during a transfer of real property. The Department supports proper inspection protocols and provides criteria regarding what constitutes an acceptable inspection protocol, which N.J.A.C. 7:9A 12.6 sets forth. The Department's recognized method of inspections may apply to all properties regardless of who is the owner or seller of these properties. It is not the Department's intent for the administrative authority to enforce this protocol. The protocol is suggested criteria for what the Department considers an adequate inspection. Please note that the administrative authority is responsible for keeping a copy of the inspection report if one is submitted to it. The Department does not have the authority to amend statutes.

216. COMMENT: Since 2003, the real estate community that could have benefited from a universally applied inspection protocol has not been able to gain access to companies and individuals that are all playing by the same set of rules. Therefore, many real estate professionals have gravitated toward companies that allow for a more cursory inspection. This situation allows for many septic systems to "pass" and the real estate deal moves forward when the system may actually need repairs or the "buyer" has not been given a complete report

(NJDEP style) to make a more informed buying decision. The time is now for the NJDEP to step-up and make the use of the septic inspection protocol a requirement (no exceptions). Additionally, the NJDEP should require all septic system inspectors to obtain proper training and certification through NSF International, National Association of Wastewater Transporters (NAWT), or New Jersey Septage Management Association (NJSMA). All septic system inspectors should be required to complete and submit to the NJDEP a signed and notarized "Ethics Statement". The Ethics Statement will require the inspector to sign that they will conduct all of their New Jersey septic inspections in accordance with the NJDEP septic inspection protocol as well as a pledge to maintain a high level of honesty and integrity as they perform their inspections. All septic inspection training entities (NAWT, NJSMA, and NSF) have a requirement to sign such a document. It is the NJDEP's responsibility to ensure that a minimum set of requirements is put in place (not just a voluntary registry) to help ensure that all inspections are conducted "professionally". Keep in mind that currently there are no requirements to call yourself a septic system inspector. The time is now to create an environment where a septic inspector can refer to themselves as a professional. If this situation does not change now, the NJDEP will setup the industry for another long period of time for the "Wild West" scenario to rule, and the true desire of the NJDEP, to protect human health and the environment, will not be obtained. Further, due to the NJDEP not requiring the septic inspection protocols be followed, all companies that do inspections will not report their findings to the County Health Departments within 10 business days as the protocol specifies. Again, this will lead to another period of time were there are companies that want to do it right versus those companies that want to operate on the fringes. Nobody is served consistently well under this "voluntary" approach. In Summary, how can the septic industry expect positive changes when

all that is happening with the new amendments to N.J.A.C. 7:9A, as it relates to septic inspections, is a “hope” that things will get better? The proposed amendments state things like - “the septic inspection protocol is not required” and “encouraging” mortgage companies and realtors to require the protocol. This is ludicrous! Why is the NJDEP giving the real estate people (not qualified as septic experts) the ability to make this very important decision? It is time for the NJDEP to take a leadership role in this very important area and begin the long overdue process of obtaining quality, objective septic inspection reports so that all parties are served well. So much rides (such as the good of the people and the environment) on a properly conducted septic inspection. (21)

RESPONSE: See the Response to Comment 9 regarding the establishment of a program to license septic system inspectors. It is the Department’s intent to support proper inspection methods and provide criteria regarding what constitutes an acceptable inspection protocol. As more fully described in the proposal Summary at 43 N.J.R. 508 the Department developed the inspection protocol based, in part, on the original New Jersey Septage Management Association (NJSMA) Standards, who collaborated with the Pennsylvania Septage Management Association (PSMA), NJSMA certified onsite wastewater treatment system inspectors and Rutgers Cooperative Extension. This protocol was developed in response to concerns raised by private citizens, administrative authorities, and the real property industry, as well as issues identified by the Department in implementation of the current rules. The Department anticipates that this protocol will become the Standard demanded by home buyers, mortgage lenders and others in the real estate industry.

217. COMMENT: Since there is a clear definition of what constitutes a “malfunctioning”, “failing” or “non-compliant” system, the qualified inspector should be able to point out that the conditions found match that definition. For example, if sewage is observed bubbling onto the ground surface or flowing into a stream or pond, is there a question about whether the system is malfunctioning? The uncertainty would arise from the situations where conditions are not so clear-cut and an official interpretation is needed. Having worked full time in a number of health departments, the commenter certainly understand the need to report all “malfunctioning” systems to the administrative authority, in order to protect public health. However, since the amendments make it clear that the inspection protocol is not mandated, and all inspectors do not have to follow the protocol (including submitting all reports to the local authorities) it is very likely that homeowners who do not want their “business” reported to town officials will make it a point to hire only individuals or companies that do not follow the protocol (and therefore do not have to submit inspections reports). This situation will create an extra incentive to not follow the recommended inspection protocol. (5)

RESPONSE: As identified in the proposal at 43 N.J.R. 508-509, the Department has developed a professional protocol for conducting septic system inspections. This protocol is focused on professional standards for septic system inspections conducted as part of a real property transfer. The protocol is based on the original New Jersey Septage Management Association (NJSMA) Standards, who collaborated with the Department and various other stakeholders to produce this new version. The NJSMA developed its original document based on a document developed by

the Pennsylvania Septage Management Association (PSMA) with consideration to input by NJSMA certified onsite wastewater treatment system inspectors and the Rutgers Cooperative Extension. The protocol provides for a method to objectively evaluate the system's characteristics and the identification and evaluation of each system component leading to a conclusion about the system's condition at the time of inspection. The Department believes that the demand for such a Standard to apply to inspections will lead to those involved in the real estate industry, including lenders and those representing buyers, to demand that the protocol be followed and that it will be an important tool to achieve the goals identified in the proposal Summary, which include providing a greater degree of certainty, confidence and consistency into the real property transfer process by having a professional standard along with the requirement to report the results to the administrative authority.

218. COMMENT: It’s good to see the Department has finally come up with protocol for system inspections. Many system inspections indicate malfunctioning systems when it is not appropriate. (27)

RESPONSE: The Department acknowledges support for the inspection protocol.

N.J.A.C. 7:9A-13 Critical areas

219. COMMENT: The concept of “critical areas” is introduced for the first time in this version of the rules. There is virtually nothing in the standards for the identification of these areas or any

future regulations related thereto. This seems to be an effort on behalf of the Department to expand its regulatory reach outside of the standard rulemaking process. The regulation of "critical areas" is the purview of local land use boards and other regional planning agencies like the Pinelands and Highlands. N.J.A.C. 7:9A is a set of regulations governing the design, construction and maintenance of septic systems. It is not a land management ordinance governing slopes, riparian buffers, etc. If a design standard is required, it should be applicable regardless of any designated "critical area." The section seems to be an attempt on the part of the Department to develop rules whereby it can create "mini-Pinelands" and "mini-Highlands" areas with additional regulations. (8)

RESPONSE: The Realty Improvement Sewerage and Facilities Act at N.J.S.A. 58:11-44 specifically authorizes the Department to establish critical areas when there has been determined to be a public health issue related to sewerage facilities. Subchapter 13 was developed in strict conformance with the requirements of that statutory authority and provides the regulations necessary to implement that portion of the law. It may be possible that in establishing a critical area, issues such as minimum levels of treatment, minimum lot sizes or other criteria may need to be addressed. However, the Department intends to use the provision as a tool to identify areas where problem systems exist and areas where soil types are present that would impact onsite systems to ensure that new systems are properly located and designed based upon that region's limited ability to support onsite systems. The Department also intends to use this designation to expedite approvals as necessary to implement regional solutions for existing problem areas and potentially provide access to funding to support those efforts.

N.J.A.C. 7:9A

Appendix B

220. COMMENT: The Department should add an affidavit with the applicant's signature that states that the information provided for this plan design includes the location of all proposed structures, uses, parking areas, landscaping, etc. for the proper calculation of this design and to ensure proper location of the disposal field. (7)

RESPONSE: The information listed by the commenter is required to be included on all site plans developed pursuant to N.J.A.C. 7:9A-3.5(c)2. Site plans are required to be developed in accordance with the rules governing the State Board of Professional Engineers and Licensed Surveyors (N.J.A.C. 13:40), which are required to be signed and sealed by the licensed professional(s) that developed the site plan. This is essentially a certification by those professionals that they have identified those issues in accordance with the State Board of Professional Engineers and Licensed Surveyors rules. Therefore, since most applicants are not licensed professional engineers or land surveyors who are charged with developing site plans, and the plans are signed and sealed by those professionals, which is essentially equivalent to an affidavit, the Department does not feel a statewide requirement for an additional applicant affidavit is warranted. However, if an administrative authority wishes to adopt such an affidavit as part of their application requirements within their jurisdiction, such a requirement would be within their authority and would not be objected to by the Department.

N.J.A.C. 7:9A

Appendix E

221. COMMENT: The form refers to a Department inspection protocol technical manual. Before any rule that incorporates this document is adopted, the technical manual itself must be fully vetted. The Department is typically years behind rulemaking when it comes to developing the technical manual. In the interim, the regulated public is left to guess at what to do. (8, 12)

RESPONSE: As the Department described at 43 N.J.R. 508, the Department has developed and distributed the "Technical Guidance for the Inspection of Onsite Wastewater Treatment and Disposal Systems", which, as identified in the proposal, is maintained on the Department's website at http://www.state.nj.us/dep/dwq/pdf/inspection_guidance.pdf. This document has existed since July 2003 and was developed as part of a large stakeholder process over several years. The document has undergone updating to reflect the rule adoption and will be available on the DEP's website at http://www.state.nj.us/dep/dwq/bnpc_home.htm upon publication of this rule in the New Jersey Register.

222. COMMENT: The on-site inspection form does not seem to address some of the issues associated with inspections. As a practical matter, most inspections are done as part of a real estate transfer and the property owner is not the "customer." The property owner needs to approve the inspection and consent to the access to the property. While this is probably not a practical issue since the inspection will be required for a sale to occur, the form does not recognize that the person paying for the inspection (the customer) is not the property owner and cannot authorize access to the property for the inspection. (8, 12)

RESPONSE: The Department specifically addresses these issues on the forms located in Appendix F. Particularly, the first page of the form specifically identifies Client Information, has check boxes to indicate if the client is different from the owner of the property, and a separate box for system location, which is often different from the address of the client, whether it be a property owner or a property buyer. Further, in the system inspection protocol in Appendix E, proposed at 43 N.J.R. 541, item 1(a) specifies, "Obtain a signed inspection authorization from the owner of the property or its authorized agent before commencing any of the following."

Summary of Agency-Initiated Changes

The Department is modifying the rules on adoption to replace references to “an NJPDES” to “a NJPDES” in three locations in the proposal to be consistent with other references to NJPDES rules and permits in this chapter and N.J.A.C. 7:14A.

Federal Standards Statement

Executive Order No. 27 (1994) and N.J.S.A. 52:14B-1 et seq. require State agencies which adopt, readopt or amend State regulations that exceed any Federal standards or requirements to include in the rulemaking document a Federal standards analysis.

The Department’s authority for regulating the construction of individual subsurface sewage disposal systems comes solely from State statute, specifically N.J.S.A. 58:11-23 et seq., 58:10A-1 et seq., 13:lD-1 et seq., and 26:3A2-21 et seq. The rules at N.J.A.C. 7:9A are not promulgated under the authority of, or in order to implement, comply with, or participate in any program established under Federal law or under a State statute that incorporates or refers to

Federal laws, Federal standards, or Federal requirements. Therefore, the Department has determined that no further analysis is required under Executive Order No. 27 and N.J.S.A. 52:14B-1 et seq.

Full text of the readopted rules may be found in the New Jersey Administrative Code at N.J.A.C. 7:9A.

Full text of the amendments to the proposal follows (additions to proposal indicated in boldface with asterisks *__thus__*; deletions from proposal indicated in brackets with asterisks *[thus]*):

SUBCHAPTER 1. GENERAL PROVISIONS

7:9A-1.6 General prohibitions

(a) - (j) (No change from proposal.)

(k) The administrative authority shall not approve the construction, installation, repair or alteration of any system, or part thereof, that is located on a property other than the property on which the structure it serves is located, until it is in receipt of a copy of a deed notice prepared in accordance with the New Jersey Recording Act, N.J.S.A. 46:15-1.1 et seq., recorded with the office of the clerk or the registrar of deeds and mortgages of the county in which the property where the system is located. The deed notice shall run with the property and be binding upon the property owner and the successors in interest in the property or in any part thereof. The deed notice shall include:

1. – 2. (No change from proposal.)

3. The site plan location of all the system components and the associated, applicable separation distances on the properties in (k)1 and 2 above, as set forth in N.J.A.C. 7:9A-4.3* **or a reference to those materials permanently on file with the administrative authority***; and

4. (No change from proposal.)

(l) (No change from proposal.)

[(m) The administrative authority shall not approve an application for the construction, alteration, repair or operation of a system which will cause any injury to persons or property without the affected person's written consent, infringe on another person's property rights, or violate any Federal, State and/or local law or regulation.]

SUBCHAPTER 2. DEFINITIONS

7:9A-2.1 Definitions

The following words and terms, when used in this chapter, shall have the following meanings unless the context clearly indicates otherwise.

…

["Active grease removal component" means a sanitary sewage pretreatment device designed to actively remove fats, oils and grease, as well as reduce total suspended solids, biological and chemical oxygen demand, and is incorporated into septic system design by a septic system designer and takes into consideration the existing or anticipated sanitary wastewater strength and the required removal capabilities identified in N.JA.C. 7:9A-8.1(i).]

…

"Advanced wastewater pretreatment device" means an NSF International (NSF) Standard 40 or Standard 245 certified technology which may be incorporated as a part of an onsite

wastewater treatment system, which bears the NSF mark and is designed, installed, operated, monitored and maintained in accordance with that certification and this chapter. ***This definition also includes those technologies that are authorized for use in the Pinelands Area through the Pinelands Advanced Wastewater Treatment Systems Pilot Program at N.J.A.C 7:50-10.23.***

…

"Disposal field" means a *[drip]* disposal bed**,** a group of one or more disposal trenches, a ***drip*** dispersal area designed in accordance with N.J.A.C. 7:9A-10.8, or a seepage pit designed in accordance with N.J.A.C. 7:9A-11 or a seepage pit previously approved for sanitary sewage disposal. The perimeter of the disposal field corresponds to the perimeter of the disposal bed, or ***the outermost extent of fill material in a fill enclosed system, and the extent of the lateral fill extension in a mounded system,*** a line circumscribing the outermost edges of the outermost disposal trenches and including the area between the disposal trenches or the outermost layer of filter material surrounding a seepage pit.

…

"High strength wastewater pretreatment component" means a sanitary sewage pretreatment device designed to actively remove fats, oils and grease, as well as reduce total suspended solids, biochemical and chemical oxygen demand, and is incorporated into septic system design by a septic system designer and takes into consideration the existing or anticipated sanitary wastewater strength and the required removal capabilities identified in N.JA.C. 7:9A-8.1(i).

…

"Septic system inspector" means a person who performs inspections of systems in accordance with N.J.A.C. 7:9A-12.6 ***for inspections during real property transfers*.**

…

"Sink station activities" means sanitary sewage generating activities associated with, but not limited to, hair styling at beauty salons and parlors*[, custodial, janitorial, and slop sinks]*.

…

SUBCHAPTER 3. ADMINISTRATION

7:9A-3.3 Existing systems

(a) (No change from proposal.)

(b) Existing systems associated with a realty improvement or structure that undergoes a reconstruction as defined in the Uniform Construction Code, N.J.A.C. 5:23, without a change in use, may be approved to be used by the administrative authority when:

1. (No change from proposal.)

2. A septic system designer certifies that the existing septic tank and disposal field [are] **do** not *[malfunctioning]* ***exhibit any condition representative of non-compliance, including any of the malfunction criteria listed at N.J.A.C. 7:9A-3.4(b)*** and are adequate to treat and dispose of the estimated volume and type of sanitary sewage generated by the reconstructed structure, the existing system may continue to be used, limited to the following cases:

i. (No change from proposal.)

ii. The existing system was approved by the administrative authority after *[August 18, 1999]* ***December 31, 1996***.

(c) - (e) (No change from proposal.)

7:9A-3.5 Permit to construct or alter

(a) - (b) (No change.)

(c) The applicant shall submit a complete, accurate and properly executed application to the administrative authority. All soil logs, soil testing data, design data and calculations, plans and specifications, and other information submitted in connection with the subsurface sewage disposal system design shall be signed and sealed by a septic system designer except where N.J.A.C. 7:9A-3.3(d) or (e) allows otherwise. The application shall include the following information:

1. – 2. (No change from proposal.)

3. A site plan, prepared in accordance with N.J.A.C. 13:40-7and drawn at a scale adequate to depict clearly the following features within a 150 foot radius around the proposed system:

i. – ix. (No change.)

x. Location of *[stream encroachment boundaries for]* ***riparian zones, flood hazard areas and floodways,*** and streams within the near vicinity of the site; and

xi. (No change.)

4. – 9. (No change.)

(d) – (f) (No change.)

7:9A-3.9 Treatment works approval

(a) - (h) (No change from proposal.)

(i) Upon the issuance of a treatment works approval by the Department pursuant to this chapter, the administrative authority may issue final *[construction]* ***design*** approvals. Final

[construction] ***design*** approvals issued by the administrative authority must reflect all deviations from this chapter as specified in the treatment works approval and must be conditioned upon compliance with any requirements contained in the treatment works approval.

7:9A-3.10 NJPDES permits

(a) (No change from proposal.)

(b) Subsurface sewage disposal systems which serve facilities other than single family dwelling units and which are located, designed, constructed, installed, altered, repaired and operated in conformance with the requirements set forth in this chapter, and N.J.S.A. 58:11-43 et seq. where these restrictions are applicable, are deemed to have *[an]* ***a*** NJPDES permit-by-rule pursuant to N.J.A.C. 7:14A-7.5(a)1 and 8.5(b)1.

(c) (No change.)

7:9A-3.16 Other sanitary sewage disposal units

(a) Cesspools, privies, outhouses, latrines, pit toilets or similar sanitary sewage disposal units are not systems. When an administrative authority discovers a privy, outhouse, latrine, pit toilet or similar sanitary sewage disposal unit, or any cesspool that serves a structure and that is in need of repair or alteration, it must order these units ***be*** abandoned and a conforming system installed except:

1. - 2. (No change from proposal.)

(b) *[Except]* ***Effective June 2, 2012, except*** as provided at (c) below, all cesspools, privies, outhouses, latrines and pit toilets that are part of a real property transfer shall be abandoned and replaced with a system in accordance with (a) above.

(c) - (d) (No change from proposal.)

7:9A-3.17 System professionals

(a) An authorized installer shall, upon request, provide the Department or the administrative authority with written evidence from those manufacturers and/or system integrators certifying that the installer has sufficient knowledge to install the proprietary technologies in accordance with all manufacturer specifications and this rule pursuant to N.J.A.C.7:9A-8.3, 9.8 and 10.8, as applicable. Beginning January 1, *[2012]* ***2013***, an authorized installer shall also be in possession of a valid Certified Installer of Onsite Wastewater Treatment Systems (CIOWTS) Advanced Level certification from the National Environmental Health Association (NEHA).

(b) - (c) (No change from proposal.)

7:9A-3.18 Requirements for certification of sewerage facilities serving subdivisions involving 50 or more realty improvements

(a) (No change from proposal.)

(b) The TWA application for 50 or more realty improvement certification shall include the following information:

1. - 3. (No change from proposal.)

4. A *[Pinelands Certificate of Compliance or Pinelands development approval]* ***“Pinelands Certificate of Filing” or a Pinelands “Public Development Approval”*** as applicable or a certification by the applicant that the project is not subject to the requirements of the Pinelands Comprehensive Management Plan N.J.A.C. 7:50;

5. - 7. (No change from proposal.)

(c) - (i) (No change.)

SUBCHAPTER 4. SITE EVALUATION AND SYSTEM LOCATION

7:9A-4.3 Distances

The minimum separation distance between the various components of the system and the other features listed shall conform to and be maintained in accordance with Table 4.3 below. The location of a new well must be in conformance with the requirements of N.J.A.C. 7:9D. No permit or waiver issued ***outside of this Chapter*** by any local, State or Federal entity shall be construed to permit deviation from or a waiver of the separation distances requirements listed in the Table 4.3 below.

SUBCHAPTER 6. PERMEABILITY TESTING

7:9A-6.1 General provisions for permeability testing

(a) - (k) (No change.)

(l) Where test sampling indicates inadequate permeability ***in a specific soil horizon*** to comply with this chapter, the test location(s) ***established both horizontally and vertically*** and an area 15 feet around the test location(s) ***in that same soil horizon*** shall not be utilized as disposal area unless three additional replicate tests are performed within that area ***and horizon***, each of which demonstrate acceptable permeability.

7:9A-6.3 Soil permeability class rating

(a) – (e) (No change.)

(f) The following procedure shall be used for the hydrometer analysis:

1. – 4. (No change.)

5. Step Five: Using test data reporting forms provided in Appendix B, record, the following data:

i. (No change.)

ii. Hydrometer calibration, Rc *__and Temperature (°F)__* (Step One);

iii. – iv. (No change.)

(g)- (h) (No change.)

SUBCHAPTER 7. GENERAL DESIGN AND CONSTRUCTION REQUIREMENTS

7:9A-7.3 Types of wastes

(a)-(d) (No change.)

(e) Discharges from commercial activities where wastewater is anticipated to contain significant quantities of blood, hide, flesh, bones, paunch materials, viscera, offal and/or non-biodegradable solids of animal origin shall not be discharged to an onsite system unless specifically authorized under *[an]* ***a*** NJPDES permit. Examples of such activities include, but are not limited to, slaughtering, rendering, food processing, processing deceased human bodies for burial or other disposition and surgical procedures.

7:9A-7.4 Volume of sanitary sewage

(a) – (f) (No change.)

Table 7.4(a)

Primary Activity	*Daily Volume (gallons)*	*Units*	*Footnotes*
Commercial Use	**15**	**Employee or**	**1, 2, 3**

	0.125	**Gross Square Footage (whichever results in greater volume)**	
General Assembly	**3**	**Seat/Person**	**1, 2, 4**
Congregate living	**130** **50**	**Sleeping unit** **Bed (whichever results in greater volume)**	**1, 5**
Warehouse	**15** **5**	**Maximum Employees; and Delivery/Field Personnel**	**1, 2, 6**
Vehicle service	**125** **10**	**Fueling Position; and** **Vehicle served in service bays**	**1, 2, 7**
Education/Child care	**Go to Table 7.4(b)**	**Maximum number of students (includes teachers and other employees)**	**1**

Table 7.4(b) Additional Design Criteria

***Additional Source of Sanitary Sewage* 8**	***Daily Volume (gallons)***	***Units***	***Footnotes***
Private Access Restroom	**10**	**Person Served**	
Public Access Restroom	**5**	**Person Served**	
Showers	**5**	**Person Served**	**6, 9**
Food Service	**5** **35**	**Person Served; or** **Seat (whichever results in greater volume)**	**1, 7, 10**
Laundry	**Increase expected daily volume from other activities by 50% or** **550**	 **Machine**	**1, 11**

Sink Station	**120**	**Sink**	**2**
Minimum Criteria	**350**		**12**

Footnotes:

1. - 2. (No change from proposal.)

3. *[Medical offices, including veterinary, shall include an additional criterion of five gallons per patient per day based upon the number of patients that could be present on a maximum service day.]* Kennels and veterinary offices with kennels shall include an additional 10 gallons per animal that could be kenneled on a maximum service day.

4. - 12. (No change from proposal.)

SUBCHAPTER 8. PRETREATMENT COMPONENTS

7:9A-8.1 Grease removal ***and high strength wastewater pretreatment*** components

(a) Restaurants, cafeterias, institutional kitchens and other facilities discharging large quantities of grease shall use a grease trap and *[an active grease removal component]* ***a high strength wastewater pretreatment component***. A garbage grinder shall not be used when grease removal components are required.

(b)-(h) (No change.)

(i)*[Active grease removal components]* ***High strength wastewater pretreatment components*** shall be approved by the administrative authority only if the components are designed, constructed and certified by a septic system designer to actively treat and therefore reduce fats, oils and grease, total suspended solids, biochemical oxygen demand and chemical oxygen demand. The components shall be designed to meet the following effluent criteria:

Constituent	Concentration (mg/L)

Total suspended solids (TSS)	155
5-day biochemical oxygen demand (BOD_5)	155
Fats, oils and grease (FOG)	70
Chemical oxygen demand (COD)	500

(j) The septic system designer certification of the *[active grease removal components]* ***high strength wastewater pretreatment component**s** must specify how the grease removal components are to be installed and maintained to achieve the identified effluent design criteria.

(k) - (l) (No change from proposal.)

7:9A-8.2 Septic tanks

(a) – (i) (No change.)

(j) Inlets and outlets of septic tanks shall conform to the following specifications:

1.-2. (No change.)

3. A septic solids retainer or septic effluent filter shall be installed and maintained in conjunction with all new septic tanks prior to the effluent distribution network and in accordance with all manufacturer's specifications. Septic solids retainers and septic effluent filters shall be certified by, and bear the mark of, NSF International (NSF) under NSF Standard 46. ***The Department recommends that filters be a minimum of six inches in diameter (or equivalent area) measured at the inlet to the filter. Additionally, the Department recommends that system designers provide a means in the design to prevent flow of solids, scum and floatables out of the tank when the filter is removed for maintenance.*** Outlet connections of

an existing tank or each compartment thereof and connections between new tank compartments or tanks installed in series shall be provided with a tee not less than four inches in diameter or a durable baffle equivalent in size. They shall be permanently fastened in place with the bottom opening extending below the liquid level by a distance equal to 25 to 40 percent of the total liquid depth. Outlet baffles or tees shall be provided with a gas deflection device adequately designed to prevent gases generated in the septic tank from rising through the outlet baffle or tee. The gas deflection device shall be constructed of, or coated with, materials which are resistant to corrosion by sulfuric acid and shall be securely fastened to the tee or the side of the tank. Figure 12 of Appendix A illustrates several acceptable gas deflection devices. In lieu of a baffle or tee connection, a septic solids retainer or septic effluent filter installed and maintained in accordance with this chapter may be used. Where a septic solids retainer or septic effluent filter is used, a gas deflection baffle is not required.

(k) - (l) (No change.)

(m) All tanks, including risers and inspection ports to the highest joint, shall be tested for *[water tightness]* ***watertightness*** after installation *[and before backfilling]* using hydrostatic or vacuum tests in accordance with the following:

1. *[Water tightness]*** **Watertightness*** testing procedures and criteria for concrete tanks shall follow the methods described in American Standard Testing Method (ASTM) C-1227 standards incorporated by reference, as amended, or the National Pre-cast Concrete Association (NPCA) testing criteria and procedures specified in its Precast Concrete On-site Wastewater Tank Best Practices Manual incorporated by reference, as amended. The ASTM methods can be obtained at: http://www.astm.org/Standard/index.shtml and the NPCA methods may be obtained at: http://www.precast.org/technical-services-overview.

2. (No change from proposal.)

3. Water used for this testing shall be either from a potable water source or reclaimed water for beneficial reuse authorized by *[an]* ***a*** NJPDES permit.

4. - 5. (No change from proposal.)

(n) (No change.)

7:9A-8.3 Advanced wastewater pretreatment components

(a) The use of an advanced wastewater pretreatment device *[in lieu of or]* in addition to a septic tank**, *or in lieu of a septic tank provided a primary settling component is incorporated into the design,**** may be allowed or required, at the discretion of an administrative authority, for new construction, projects where there is an increase in the expected volume of sanitary sewage pursuant to N.J.A.C. 7:9A-7.4, or to alter an existing, malfunctioning system. For individual systems with expected volumes of sanitary sewage less than or equal to 1,500 gallons per day, advanced wastewater pretreatment devices shall have obtained an NSF Standard 40 and/or Standard 245 certification, bear the mark of NSF and must be used in accordance with all conditions of that certification in addition to the requirements in this chapter. For systems with expected volumes of sanitary sewage greater than 1,500 gpd or systems that receive waste flows that are not residential in nature, advanced wastewater pretreatment devices shall be from a manufacturer that has obtained an NSF Standard 40 and/or Standard 245 certification for the treatment technology, be certified by the manufacturer that the technology is designed to achieve secondary effluent standards for the actual or proposed waste strength that will be generated at the site and must be used in accordance with all requirements in this chapter.

The Department shall maintain a list of advanced wastewater pretreatment devices that are applicable under this section that comply with the following:

1. (No change from proposal.)

2. Listed manufacturers shall make available *[up to date]* ***up-to-date*** training, design, installation and service manuals and materials to any administrative authority or the Department upon request.

3. (No change from proposal.)

(b) Prior to submitting any design that includes an advanced wastewater pretreatment device to the administrative authority, a system designer shall:

1. - 5. (No change from proposal.)

6. Include in the design of the system a control panel that tracks, at a minimum, pump elapsed time, cycle counts and high level alarm counts or other means to determine flow through the system and any other system information for troubleshooting purposes as recommended by the manufacturer.

i. Systems may be equipped with a telemetry control panel, attached to an *[internet based]* ***internet-based*** interface that provides continuous remote monitoring, information management and control of the advanced wastewater pretreatment device; or

ii. (No change from proposal.)

7. (No change from proposal.)

8. Include in the system design only advanced wastewater pretreatment devices that are *[water tight]*** **watertight***. All advanced wastewater pretreatment devices must be designed in a manner that considers all structural issues including, but not limited to, venting of the disposal

area, load bearing, buoyancy and all other structural effects on the treatment unit for the intended installation;

9. - 11. (No change from proposal.)

(c) The following requirements are applicable to the installation of an advanced wastewater pretreatment device;

1. - 4. (No change from proposal.)

5. The watertightness of any tanks specified in the design must be *[water tight]* ***watertight*** tested at the installation site after the tank has been installed, in accordance with the same requirements identified for septic tanks at N.J.A.C. 7:9A-8.2(m).

(d) – (e) (No change from proposal.)

SUBCHAPTER 9. EFFLUENT DISTRIBUTION NETWORKS

7:9A-9.8 Products in lieu of laterals and/or filter material

(a) The Department shall maintain a list of products that may be used in lieu of laterals specified in N.J.A.C. 7:9A-9.5 and/or filter material specified in N.J.A.C. 7:9A-10.3(e) as acceptable alternatives to those specifications. For systems designed as pressure dosing networks (see N.J.A.C. 7:9A-9.6), these products may be used in lieu of the filter material only, and then only if the required laterals are securely installed within the specified product. These products may be used for a trench or bed configurations designed in accordance with this section in conventional, soil replacement-bottom lined, soil replacement-fill enclosed, mounded, and mounded soil replacement systems, designed in accordance with the requirements of N.J.A.C. 7:9A-10. Manufacturers of these products shall comply with the following:

1. (No change from proposal.)

2. Manufacturers shall make available *[up to date]* ***up-to-date*** training, design, installation and service manuals and materials to any administrative authority or the Department upon request.

3. - 4. (No change from proposal.)

(b) – (h) (No change from proposal.)

SUBCHAPTER 10. DISPOSAL FIELDS

7:9A-10.2 Disposal field sizing requirements

(a)-(d) (No change from proposal.)

TABLES 10.2(b) – (d) (No change from proposal.)

TABLE 10.2(e) MINIMUM REQUIRED DISPOSAL FIELD BOTTOM AREA PER GALLON OF DAILY SANITARY SEWAGE VOLUME, A/Q<1> (ft<2>/gal per day) WITH AN ADVANCED WASTEWATER PRETREATMENT DEVICE

*[Soil Class	Permeability (in/hr)	Percolation Rate (min/in)	Adjusted A/Q1 (ft2/gpd)
K4	>6-20	<3-15	1.233
K3	>2-6	<15-30	1.704
K2	>0.6-2	<30-45	2.190
K1]*	>0.2-0.6	<45-60	2.596
Pressure Dosing Design			0.956

1 Additional Requirements (No change from proposal)

(e) (No change from proposal.)

7:9A-10.5 Specific requirements for mounded disposal field installations

(a)–(d) (No change.)

(e) A mound shall be constructed by placing a layer of fill material over the ground within and adjacent to the area of the disposal field. The method of emplacement and lateral extent of the fill material shall be as follows:

1. – 4. (No change.)

5. At the outside edge of the lateral fill extension, the mound shall be terminated by sloping the top surface of the fill layer downward, or by providing a berm of soil material meeting the requirements of N.J.A.C. 7:9A-10.3(f)2 and 3, at a slope of three to one or less. Alternatively, lateral support for the fill layer may be provided by a retaining wall meeting the following requirements:

i. – iii. (No change from proposal.)

iv. The retaining wall shall be designed by a *[septic system designer]* ***New Jersey licensed professional engineer*** who shall certify, in accordance with N.J.A.C. 13:40-7 of the State Board of Professional Engineers and Land Surveyors rules, that the requirements of (e)5i through iii. above are met by the proposed design;

v. Construction of the retaining wall shall be supervised by the *[septic system designer]* ***New Jersey licensed professional engineer***; and

vi. The administrative authority shall not issue a certificate of compliance until an as-built plan has been prepared and certified by the *[septic system designer]* ***New Jersey licensed professional engineer*** confirming that the retaining wall has been constructed in accordance with the approved design plan.

6.–7. (No change.)

(f)–(h) (No change.)

7:9A-10.8 Specific requirements for drip dispersal

(a) – (c) (No change from proposal.)

(d) The septic system designer shall provide for the following minimum dosing design requirements:

1. Each drip dispersal field or zone shall be time-dosed at regular intervals, throughout the day, at an average flow/peak design flow dose regime, as specified by the system integrator or the septic system designer if a dosing regime is not specified by the system integrator ***in a manner that avoids soil saturation***. The system control panel shall include a controller that shall provide for a zone to be “rested” or taken “out of service” manually. The controller shall have the capability to bypass the zone(s) that have been taken out of service and dose the next available zone with normal sequence continuation. The following requirements are additionally applicable to the dosing of a drip dispersal system:

i. - ii. (No change from proposal.)

2. – 3. (No change from proposal.)

(e) (No change from proposal.)

SUBCHAPTER 12. OPERATION AND MAINTENANCE

7:9A-12.2 System maintenance

(a) (No change from proposal.)

(b) Maintenance activities shall include, but not be limited to, inspection of the septic tank or other pre-treatment units, the distribution box and connecting pipes, and the disposal field as well as scheduled pump-outs of the septic tank. Maintenance activities shall be conducted in a manner consistent with this chapter, the approval issued by the local administrative authority and any applicable mandatory maintenance program as described in (a) above. Upon detection, all potentially non-compliant systems shall be reported to the administrative authority in accordance with N.J.A.C. 7:9A-3.4. ***Septic effluent filters shall be maintained in such a way to prevent solids, scum or floatables from entering the effluent distribution network and disposal field.***

(c) - (e) (No change from proposal.)

APPENDIX B

STANDARD FORMS FOR SUBMISSION OF SOILS/ENGINEERING DATA

COUNTY/MUNICIPALITY _____

APPLICATION FOR PERMIT TO CONSTRUCT/ALTER/REPAIR

AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM

Form 3c – Soil Permeability Class Rating Data

1. – 5. (No change.)

6. Hydrometer calibration temperature (°F) _____

Recodify existing 6. – 15. as 7. – 16. (No change in text.)