ENVIRONMENTAL PROTECTION UPDATED 3/16/2011

WATER RESOURCE MANAGEMENT

Standards for Individual Subsurface Sewage Disposal Systems

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

Authorized By: Bob Martin, Commissioner, Department of Environmental Protection

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.,

Calendar Reference: See Summary below for explanation of exception to calendar requirement

DEP Docket Number: 02-11-01.

Proposal Number: PRN 2011-062

Submit written comments on this proposed readoption with amendments by May 6, 2011 to:

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Attn.: DEP Docket No. 02-11-01

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The Department of Environmental Protection (Department) requests that commenters submit comments on CD or disk as well as on paper. Submittals on disk or CD must not be access-restricted (for example, not locked or read-only), in order to facilitate use by the

Department of the electronically submitted comments. Submission of a diskette is not a requirement. The Department prefers Microsoft Word 6.0 or above. MacIntosh formats should not be used. Each comment should be identified by the applicable N.J.A.C. citation, with the commenter's name and affiliation following the comment.

A copy of the proposal is available on paper or on disk by calling the Department at (609) 633-7021. The rule proposal can also be found at the Department's website (www.nj.gov/dep).

The Department's proposal follows:

Summary

As the Department has provided a 60-day comment period on this notice of proposal, this notice is excepted from the rulemaking calendar requirement pursuant to N.J.A.C. 1:30-3.3(a)5.

The Standards for Individual Subsurface Sewage Disposal Systems (Standards), N.J.A.C. 7:9A, 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. Accordingly, the Department is proposing to readopt N.J.A.C. 7:9A with amendments as described below.

The Standards were first adopted in 1989, effective August 21, 1989, and last readopted without change effective January 26, 2005. The Standards were scheduled to expire on January 26, 2010. The expiration date was extended by gubernatorial directive to January 26, 2011 (See N.J.R. 468(a)). In accordance with N.J.S.A. 52:14B-5.1c, the expiration date has been extended

to July 25, 2011 as a result of the filing this notice of proposal to readopt the rules with amendment with the Office of Administrative Law.

The purpose of Standards for Individual Subsurface Sewage Disposal Systems is to protect public health as required by the Realty Improvement Sewerage and Facilities Act (1954), N.J.S.A. 58:11-23 (RISF Act), and to prevent water pollution as required by the Water Pollution Control Act, N.J.S.A. 58:10-1 et seq.

The proposed readoption with amendments continues to update the rules in a process that the Department began in 1998. The Department initiated this process by requesting that the administrative authorities (agents of the local boards of health) identify sections of the Standards for revision based on their experiences. The first phase of the three-phase amendment process corrected technical errors, clarified vague and commonly misunderstood provisions, eliminated outdated deadline requirements and delegated to administrative authorities the authority to approve repairs to systems receiving less than 2,000 gallons per day serving multiple realty improvements. These amendments were adopted on August 15, 1999 and published in the New Jersey Register on September 20, 1999 (see 31 N.J.R. 2741(a)). The Department is implementing the second and the third phases of this process by proposing this readoption with amendments.

The second phase includes proposed amendments based on the suggestions of the administrative authorities, an advisory committee and other commenters as presented below. The Department consulted and received comments from the statutory advisory committee created pursuant to the RISF Act. The statutory advisory committee convenes on a biennial basis in accordance with the RISF Act, which also specifies the core membership of this committee (see N.J.S.A. 58:11-35). In addition to the core membership, the Department also invited other organizations and individuals with appropriate expertise to participate in the advisory process

and has established this expanded group as the "Onsite Wastewater Management Advisory Committee" (Committee). Those individuals representing the agencies specifically identified in the RISF have a formal vote (designated by an asterisk (*) below). The Committee met first on October 6, 1998, and then approximately once each month thereafter until June 2001. Subsequent to those Committee meetings, subcommittees were assembled to develop the technical specifications for the onsite system inspection protocol, flow tables for nonresidential activities and fill material specifications. The Committee reconvened in March 2009 to discuss alternative technology, design standards, reporting and inspection procedures, system non-compliance and the appropriate response to non-compliant systems. The Committee met again in August 2009 to review the readoption with amendments package and discuss the incorporation of the standards for alternative technology.

The Advisory Committee has reviewed and endorsed the proposed amendments. The advisory committee consisted of the following representatives:

* New Jersey Association of Real Estate Boards

* New Jersey Health Officers Association

* New Jersey Society of Professional Engineers

* New Jersey State League of Municipalities

* New Jersey Home Builders Association

* New Jersey Institute of Municipal Attorneys

* New Jersey Title Insurance Association

New Jersey Registered Environmental Health Specialists Association

New Jersey Pinelands Commission

New Jersey Septage Management Association

Gregg Barkley, P.E., Private Citizen

Discussion of Proposed Amendments, Repeals and New Rules

The proposed amendments are divided into two categories. The first category of amendments institutes an updated onsite wastewater management program by enabling the use of technology, establishing inspection and reporting standards for individual subsurface sewage disposal systems, and providing mechanisms to improve the protection of water quality. The second category of amendments will improve the implementation of the rules by adding new requirements and by modifying or deleting existing requirements based on the administrative authorities' and other commenters' suggestions. In addition, the Department is correcting typographical errors and updating citations.

Instituting an Updated Onsite Wastewater Management Program

The Standards for Individual Subsurface Sewage Disposal Systems provide detailed design and location specifications for the construction and use of septic systems. Any septic system that does not meet these specifications is considered an “experimental system” and requires an individual Treatment Works Approval (TWA) from the Department. The proposed amendments provide new specifications for the location, design, construction, installation, operation and maintenance for septic systems that incorporate technologies considered alternatives to traditional septic technology.

The RISF Act provides the authority for the Department to set standards for the installation and use of alternative technologies at N.J.S.A. 58:11-25d. The technologies addressed in this proposal include advanced wastewater pretreatment devices, products used in lieu of laterals and/or filter material in disposal fields, and a drip dispersal method of disposal. Pursuant to the proposed amendments, systems that incorporate these technologies and conform

to the corresponding proposed requirements will be in conformance with this chapter and will not require an individual TWA from the Department.

In order to facilitate the use of the alternative technologies, the Department is proposing to maintain lists of those technologies whose manufacturers and system integrators have requested to be listed and have submitted the information required in the proposed amendments. The Department will list technologies that have been certified by the NSF International (NSF), or tested by recognized standard protocols such as American Standard Testing Method (ASTM) or American Association of State Highway and Traffic Officials (AASHTO), or, in the case of drip dispersal (which has no nationally recognized certification process) are certified by a system integrator who provides his or her pre-engineered design to the Department. The Department is not approving, certifying or otherwise determining the effectiveness of those technologies. However, the maintenance of a list will assist administrative authorities, consumers and system designers to identify technologies that have provided information required by this chapter, including verification of the performance of the technology.

However, since the Department is not approving these alternative technologies, it remains the responsibility of the septic system designer to design a system that will function properly, provided the system is adequately operated and maintained, in accordance with these rules and all manufacturer and/or system integrator specifications. It is for this reason that the Department will rely on septic system designers certifying that they are sufficiently knowledgeable of the specific Department listed products they are proposing to incorporate into a system design. These technologies are proprietary and therefore their incorporation into a system design requires sufficient knowledge of their specifications and functioning to assure they will work as certified for a particular application. Failure of the septic system designer to meet the requirements of

being sufficiently knowledgeable of the products they incorporate into their designs may result in individuals or the Department referring problems to the Board of Licensed Professional Engineers and Land Surveyors.

Proper onsite wastewater management includes assuring that systems are installed and work as designed. There are no statutory licensing requirements for individuals performing septic system inspections in New Jersey and no promulgated inspection protocol for conducting septic systems inspections. However, it is essential to assure, by proper inspection, that septic systems work as designed to protect human health and water quality. Since these rules are promulgated to protect public health as required by N.J.S.A. 58:11-23 et seq. (RISF Act), and to prevent water pollution as required by the Water Pollution Control Act, N.J.S.A. 58:10-1, et seq., the proposed amendments include a protocol for conducting inspections of onsite wastewater treatment systems at the time of real property transfers.

An essential component of the Department's goal of instituting an up-to-date onsite wastewater management program is amendments to the Standards that are designed to achieve a higher level of water quality protection. The proposed amendments will assure that all disposal units or systems that are creating a risk of contamination to the environment are fully addressed. The proposed amendments require all antiquated units such as cesspools, outhouses, privies, latrines and pit toilets be upgraded to as close to current standards as technically feasible, thereby ensuring they will treat and dispose of sanitary sewage in manner that is protective of water quality and human health. The proposed amendments also identify non-compliant systems to include malfunctioning systems, as well as systems that are not properly operated or maintained. Proposed N.J.A.C. 7:9A-3.4(b) identifies the non-compliant system conditions that indicate a malfunction and expand the list of factors that identify a system as malfunctioning. The

proposed list of factors indicating a malfunctioning system includes situations where untreated or inadequately treated sanitary sewage could enter ground water or surface water. Additionally, to update onsite wastewater management, the proposed amendments require facilities that prepare food to incorporate grease treatment in their system design or to upgrade their grease removal/ grease treatment practices to the current standards if the system is malfunctioning.

The proposed amendments also incorporate the application and certification requirements for the certification of 50 or more sewerage facilities pursuant to N.J.S.A.58:11-25.1. The Department reviews these applications as required by the RISF Act. The Department is proposing to incorporate the standard review procedures it uses for evaluating these applications, which are currently incorporated in the program's guidance document, into the rules proposed for readoption with amendments, repeals and new rules.

Improving the implementation of the rules

The second goal, improving the rules, is accomplished through clarifying how the Department intends certain provisions to be applied, incorporating more current engineering standards, and updating the rules to reflect changes in other related regulations.

The accurate determination of design volume is essential to assuring that a system is adequately designed to treat and dispose of sanitary sewage. The current method for determining design volume is based upon the type of establishment. The Department is proposing to amend how design volume is determined by replacing the existing method with a new method that focuses on the type of activity that generates wastewater at a facility. The volume of sanitary sewage is greatly influenced by the activities that occur at a facility. For example, an office building that has staff kitchens, cafeterias and/or showers will generate more sanitary sewage

than an office building that only has a bathroom. As further explained in the summary of the proposed amendments to N.J.A.C. 7:9A-7.4, this proposed change will reduce errors and misinterpretations that are associated with using the “type of establishment" to determine a design volume. The proposed amendments will assure that a system is properly sized for the volume of sanitary sewage that is generated by the activities that occur at that facility.

The proposed amendments will improve implementation of the rules by addressing newly identified issues since the last amendments were adopted and clarifying certain requirements to improve administrative authorities’ implementation of the Standards. Proposed amendments designed to improve implementation include: requirements for the technical review of applications; clarification of system component minimum separation distances; restriction of the practice of filling in areas to create an artificial island in areas subject to flooding; and the requirement for all septic system designers to incorporate adequate, unimpeded access to systems to provide for appropriate maintenance and servicing.

The proposed amendments will also provide new safeguards to prevent system malfunctions. The proposed amendments require septic effluent filters for all new septic tanks. The proposed amendments stipulate how to demonstrate compliance with the existing requirement that all septic tanks be watertight and modify the requirements for access to septic tanks.

The Department is also proposing amendments that require applicants to disclose their common plan of development or common plan of sale, defined in accordance with the New Jersey Pollutant Discharge Elimination System (NJPDES) rules at N.J.A.C. 7:14A-1.2, and estimate the volume of sanitary sewage based upon full build out plans. The proposed amendments also prohibit the approval of systems serving projects 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. This proposed amendment assures that the impacts of the overall development are considered and development that, in total, exceeds 2,000 gpd is not approved in pieces under N.J.A.C. 7:9A but instead receives appropriate analysis through the NJPDES permitting process, pursuant to N.J.A.C. 7:14A. These proposed amendments will clarify current regulatory requirements and help to direct applicants to the required permitting program and are consistent with the N.J.A.C. 7:14A definition of common plan of development. This will help avoid unnecessary delays in the permitting processes and improve implementation of the rules.

The proposed amendments also update many engineering standards to improve and assure system functionality. These include updates to the suitable fill specifications for soil replacement designs, specification of how and when to use distribution boxes, factors to be considered when using ejector pumps and /or garbage grinders, and the standards for constructing retaining walls.

The proposed amendments are explained in more detail below:

Subchapter 1. General Provisions

Subchapter 1 contains the general provisions of the Standards for Individual Subsurface Sewage Disposal Systems including the purpose, scope and use of the Chapter, the prohibitions and limitations of the rules, as well as a section on penalties for violations. The Department is proposing to readopt Subchapter 1 with the following changes.

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

The proposed amendment at N.J.A.C. 7:9A-1.2(b) clarifies that this chapter is the applicable minimum standard for systems with a design volume of 2,000 gallons per day or less and identifies the differences among the standards in this chapter for standard individual subsurface sewage disposal systems, those systems designed pursuant to a treatment works approval, and those systems designed under approvals issued pursuant to the New Jersey Pollutant Discharge Elimination System rules at N.J.A.C. 7:14A. This amendment clarifies that both these rules and N.J.A.C. 7:14A have requirements for the construction and operation of septic systems.

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

Proposed amendments at N.J.A.C. 7:9A-1.6 revise the conditions prohibited or not covered by these rules. Prohibitions include antiquated disposal units such as cesspools, locating systems on other properties without the proper permits, permitting systems that exceed 2,000 gallons per day under this chapter, and injury of persons or property due to improper location of systems.

Proposed amendments at N.J.A.C. 7:9A-1.6(c) expand and clarify the existing prohibition against systems serving more than one property. The proposed amendment clarifies that the prohibition against subsurface sewage disposal systems serving more than one property that are not authorized by a treatment works approval (TWA) and/or a NJPDES permit includes not just operation of such a system, but also construction or installation of such a system. This proposed amendment recognizes that systems are not constructed or installed unless they are intended to be used and that it is necessary before construction or installation of any system occurs to assure that the appropriate analysis that occurs as part of the TWA and/or NJPDES approval process has taken place. The extent of a project and construction details are reviewed through the TWA

process and it is through the TWA process that it is determined if the project will require a NJPDES permit to discharge wastewater in a system serving more than one property. The proposed amendment also specifies that these projects might need both a TWA and a NJPDES permit or just one of these permits. The existing language states that one or the other is required. There are cases in which a project, such as a decentralized community system that serves multiple properties, that is outside the scope of this Chapter not only since it exceeds 2,000 gpd, but because the system will serve more than one property, will require both a NJPDES permit for the ongoing discharge and a TWA permit for the construction of the system.

The Department is proposing to amend N.J.A.C. 7:9A-1.6(e)2 to be consistent with the language in N.J.A.C. 7:15, Water Quality Management Planning rules, changing sewerage service area to sewer service area. A sewer service area must be identified in the applicable areawide Water Quality Management Plan pursuant to N.J.A.C. 7:15.

The Department is proposing to amend N.J.A.C. 7:9A-1.6(g) to expand the list of sanitary sewage disposal methods that are prohibited by the rules. Cesspools and other antiquated units such as privies, latrines, pit toilets, and outhouses are known to exist, but are not considered systems as defined by the current rule. Cesspools allow for the discharge of black water directly to the subsurface environment with no primary treatment. Accordingly, the existing rules prohibit new cesspools from being constructed. The Department is proposing to additionally prohibit the repair or alteration of an existing cesspool. This change is consistent with the proposed amendments at N.J.A.C. 7:9A-3.16 which prohibit the continued use of a cesspool when identified during a real estate transaction or when a malfunctioning cesspool is identified. Proposed N.J.A.C. 7:9A-3.16(a) specifies the options for a cesspool that is in need of repair or alteration. The Department is additionally proposing to amend N.J.A.C. 7:9A-1.6(g) to prohibit

the construction of privies, latrines, pit toilets, and outhouses since there is no primary treatment and, in each case, similar to cesspools, there is a direct discharge to the ground.

Currently, the rules require a TWA from the Department for systems located on properties other than the property with the structure being served by the system. The Department is proposing a new subsection at N.J.A.C. 7:9A-1.6(k) to allow the issuance of approvals for systems located on other properties provided that proof that the appropriate easements or deed restrictions are on record with the county clerk or registrar of deeds and mortgages with copies provided to the administrative authority. Since the proposed amendment allows the administrative authority to review the appropriate documentation, the owner will not have to apply for a TWA for the construction of these systems. The deed restriction also puts future owners on notice of limitations and restrictions that will be placed on these properties. Deed notices, restrictions or easements will be part of the property's permanent deed of record, in accordance with the New Jersey Recording Act, N.J.S.A. 46:15-1.1 et seq., by being filed with the county's office or the clerk or the registrar of deeds and mortgages, will run with the property during property transfers and will be binding upon the property owner and the successors in interest in the property. The 100-year lease agreement is proposed as an option to the easement requirement at N.J.A.C. 7:9A-1.6(k) because it assures an adequate degree of permanency for sewerage facilities for the life of the structure served. This stipulation will ensure that any new owners of the property in which the system is located are aware of the limitations on the property due to separation distances to system components as well as the operation, maintenance and/or possible repair or alterations that might occur to the system on their property.

A new subsection is proposed at N.J.A.C. 7:9A-1.6(l) which prohibits the administrative authority from approving a permit for a property that will allow the use of a system which will

receive greater than 2,000 gpd after all the proposed and existing improvements are completed. This prohibition is consistent with N.J.A.C. 7:9A-1.8(a)1, which restricts the administrative authority from approving systems when the total volume of sanitary sewage on that property is estimated in accordance with N.J.A.C. 7:9A-7.4 to be greater than 2,000 gpd. There is an exception for development projects that include only individual, private residences in which each system is located on the same lot as the residence and only receives sanitary sewage from that residence. This is intended to resolve problems associated with the administrative authorities inadvertently issuing approvals for portions of projects (commercial or residential or a combination thereof) that at full build-out will generate wastewater volumes greater than the 2,000 gpd limit approvable under these rules. Due to the total volume generated, these types of development therefore require a TWA and NJPDES permit for the entire property. Mistaken approvals by administrative authorities of portions of a project can lead to financial hardships on applicants who begin construction without considering other requirements, such as Water Quality Management Planning rules or NJPDES rules and have to delay their operations to obtain the appropriate permits. These hardships may include long delays in completing projects and costs resulting from major changes in designs or plans.

Proposed N.J.A.C. 7:9A-1.6(m) prohibits an administrative authority from granting an approval for the construction, installation, repair, alteration or operation of a system which will negatively impact any person or property or violate any other laws or regulations. The Department is aware that system location and construction may impact neighboring properties. For example, mounded and sloped systems can redirect stormwater runoff, which may run onto a neighbor’s property and cause erosion, flooding or even malfunction of the neighbor’s system. In addition, for alterations or repairs to address existing system malfunctions, it is sometimes

impossible not to infringe upon minimum separation distances. The administrative authority should consider the adverse impact the infringements of a reduction in a separation distance may have on the neighbor's property and the system. The applicant shall consider any potential infringement or impact on a neighboring property before applying to the administrative authority. For example, if work performed on a system with site constraints requires access through a neighboring property, or the removal of a neighbor's fence, according to this prohibition the administrative authority would require the owner is to obtain consent from the neighbor prior to issuing a system approval. If the neighbor does not consent, then the administrative authority may only approve solutions that do not cause harm to the neighbor's property and system. A septic system designer shall address any of the administrative authority's concerns regarding potential impacts. This proposed subsection also prohibits the approval of the construction, installation, repair, alteration or operation of a system by the administrative authority that will violate a Federal, State or local law or rule. For example, if a reduction to a separation distance contravenes another regulation such as a land use or drinking water regulation, the administrative authority shall not approve unless a variance or appropriate approval from the regulatory entity is issued.

N.J.A.C. 7:9A-1.8 Limitations

The proposed amendment to N.J.A.C. 7:9A-1.8(b) clarifies that when a proposed individual subsurface sewage disposal system exceeds the limitations set forth in N.J.A.C. 7:9A-1.8(a), receiving volumes greater than 2,000 gpd or receiving waste generated on properties other than the system, a TWA and a NJPDES permit for those proposed systems is required from the Department. All permits for new construction, repairs and alterations issued under the authority of N.J.A.C. 7:14A-8 require a NJPDES permit in addition to obtaining a TWA. The

administrative authority cannot approve repairs to existing systems that receive greater than 2,000 gpd or a system that serves more than one property. The owner of such a system must apply to the Department for a NJPDES permit. If the existing system that receives more than 2,000 gpd or serves more than one property is in need of repair or alteration, a construction permit, a TWA, is required in addition to the NJPDES permit. The existing exception is proposed to be deleted to be consistent with the proposed deletion of N.J.A.C. 7:9A-3.3(f). Administrative authorities can only approve the repair or alteration of an existing system if it receives less than 2,000 gpd. In the cases where an existing system is in need of repair or alteration and receives more than 2,000 gpd (and is therefore not approvable by the administrative authority under these rules), this proposed amendment requires that the appropriate permits be applied for and is consistent with the proposed amendments to N.J.AC. 7:9A-1.6.

Subchapter 2. Definitions

Subchapter 2 defines the terms used throughout the Chapter specific to the design, construction, installation, operation and maintenance of individual subsurface sewage disposal systems (ISSDSs). The Department is proposing to readopt Subchapter 2 with proposed new terms and proposed changes to existing definitions as described below.

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

The proposed amendments to N.J.A.C. 7:9A-2.1 establish definitions for new terms and modify existing definitions. Most of the proposed definitions are necessary to institute an updated onsite wastewater management program, which includes enabling the use of pretreatment and dispersal technologies and establishing inspection and reporting standards. The other proposed definitions are necessary to improve the implementation of the existing rule.

"Active grease removal component": This new definition is proposed since this term is used in the proposed amendments to the requirements for grease removal components in N.J.A.C. 7:9A-8.1. An active grease removal component is a pretreatment component that is used to treat the high strength wastewater that is produced from food production, specifically, to reduce the high quantities of fats, oil and grease, total suspended solids, and biological and chemical oxygen demands. This term is being defined since a similar term, grease trap, used in existing N.J.A.C. 7:9A-8.1 is already defined and it is necessary to distinguish between the two different types of pretreatment devices.

"Advanced wastewater pretreatment device": This new definition is proposed to describe technologies that may be utilized in accordance with proposed N.J.A.C. 7:9A-8.3. The Department has proposed to allow the use of technologies that have received NSF International Standard 40 or 245 certification and that have the ability to comply with all of the design, installation, operation and maintenance requirements proposed in this chapter. The Department is proposing to maintain a list of technologies on its website of those manufacturers that request to be listed and have provided the necessary documentation described in N.J.A.C. 7:9A-8.3 to the Department, to readily identify those technologies.

"Age-restricted unit": This proposed new definition supports the amendments proposed at N.J.A.C. 7:9A-7.4(b) specifying how to estimate the volume of sanitary sewage at these facilities in order to properly size the system. The existing term "deed-restricted senior citizen communities" is vague and misunderstood. This proposed new definition is identical to the existing term in the Neighborhood Preservation Balanced Housing Program rules (N.J.A.C. 5:43-1.5) and the New Jersey Housing and Mortgage Finance Agency rules (N.J.A.C. 5:80-26.2)

and is consistent with the requirements of the Federal Fair Housing rules (42 U.S.C. §§ 3601 et seq.)

"Authorized installer": This proposed new definition supports the proposed specifications for systems that incorporate either an advanced wastewater pretreatment device, products used in lieu of laterals and/or filter material, or drip dispersal. Proposed N.J.A.C. 7:9A-3.17 specifies requirements for authorized installers, including the requirement that they obtain written documentation from a manufacturer or a system integrator, as applicable, to acknowledge that the installer meets the manufacturer's/system integrator's minimum requirements for installing systems that incorporate an advanced wastewater pretreatment device, product used in lieu of laterals and/or filter material, and/or a drip dispersal system. This definition distinguishes an authorized installer from a "septic system installer." Septic system installers are not required to provide credentials to install systems that do not incorporate these technologies.

"Authorized service provider": This proposed definition supports the proposed specifications for systems that incorporate an advanced wastewater pretreatment device or drip dispersal. The proposed definition reflects the requirements contained in proposed N.J.A.C. 7:9A-3.17, which specifies that an authorized service provider must either have a S2 license for operating wastewater treatment facilities in accordance with N.J.A.C. 7:10A or have written documentation from a manufacturer or system integrator, as applicable, to acknowledge that the service provider meets the manufacturer or system integrator minimum requirements for the proprietary technology for servicing systems that incorporate an advanced wastewater pretreatment device or drip dispersal system.

"Commercial food service activity": This proposed new term is used in the design criteria based on activity generating sanitary sewage proposed at N.J.A.C. 7:9A-7.4. This

category of activity generating sanitary sewage is a subset of "food service activities" and may not be approved for an individual subsurface sewage disposal system by the administrative authority without a TWA from the Department. To assist the owners of commercial food service facilities in determining the total design volume based on the new design criteria in Tables 7.4(a) and (b), the owners will be required to apply for a TWA to determine design volume. The total design volume at these types of establishments is difficult to standardize since public (commercial) food service can greatly fluctuate in wastewater volumes based on patron turn-over and the type of service provided such as drive-throughs, take-out meals, or banquets and catering. "Commercial food service activities" involve the sale of food to the general public and, therefore, do not include cafeterias serving only employees at work and students at school facilities since these individuals are not considered to be the general public in that setting. However, if a facility is planning on offering food service to the public as part of their normal operations, such as banquet facilities at a church, they may be considered a commercial food service activity by the administrative authority or the Department The design volume for commercial food service activities will be based solely on the wastewater from kitchen waste and food preparation.

"Commercial use activities": This proposed new term is used in the proposed design criteria which are based on type of activity generating sanitary sewage. The proposed design criteria project the volume generated from various types of activities with commercial use activities being those associated with facilities that include stores, offices, professional centers, industrial buildings, and manufacturing facilities. This proposed new definition supports the new method for designing systems based on the types of activity that generate sanitary sewage occurring at a facility rather than generically categorizing the facility into one type designation.

This new method will provide for more accurate projections of sanitary sewage as described in more detail in the summary of amendments to N.JA.C. 7:9A-7.4. Those activities that fall under the definition of "commercial food service activities" require TWA and NJPDES approval from the Department in accordance with N.J.A.C 7:9A-7.4(f).

"Component": This new definition is proposed to provide a general reference term for an individual portion or part of a system. For example, a septic tank is a component of a standard system. This proposed term is used in various proposed amendments that update the onsite wastewater management program.

"Congregate living activities": This proposed new term is used in the new design criteria to describe wastewater generating activities at structures where there are shared amenities among residents, such as common bathrooms, kitchens, dining areas and/or laundry facilities. Facilities housing congregate living activities include available beds at school/camp dormitories, motels, nursing/rest homes, group homes, assisted living facilities and boarding houses. This definition typically excludes hotels which include banquet or conference facilities, because those facilities contain commercial food service activities. Hotels which have these activities, above and beyond congregate living activities, are required to come to the Department for a TWA pursuant to N.J.A.C. 7:9A-7.4(f) to determine design volume. Similar to other establishments such as commercial food service, hotels can have a variety of activities generating sanitary sewage beyond that generated from the residents in the rooms such as functions at conference and reception facilities.

"Disposal field": This definition is proposed to be amended to include drip dispersal areas designed in accordance with the proposed N.J.A.C. 7:9A-10.8 as well as seepage pits as a type of disposal field. The definition is additionally proposed for amendment to specify what the

Department considers to be the physical extent of a seepage pit for the purpose of identifying the dimensions of an existing seepage pit with reference to the existing disposal field. New seepage pits are limited by N.J.A.C. 7:9A-7.6. Seepage pits approved prior to January 1, 1990, disposal fields repaired to correct a malfunctioning condition that were approved after January 1, 1990, or disposal fields of systems built in accordance with N.J.A.C 7:9A-11, are considered to be disposal fields. This amendment complements the new definition for a "system" which includes this term.

"Drip emitter" or "emitter": This proposed new definition is of a term used in the specifications for drip dispersal at proposed N.J.A.C. 7:9A-10.8. A drip emitter is a device that controls the flow of effluent from the dripperline to the subsurface. A drip emitter must be functioning properly to assure that a drip dispersal system is working properly, therefore it is essential to have an industry agreed upon definition of the device.

"Drip dispersal": This new definition is proposed to describe systems that utilize a technology that disposes of sanitary sewage in a manner that does not create a saturated subsurface condition, which occurs in a traditional septic system. Proposed N.J.A.C. 7:9A-10.8 contains specifications for the design, construction and maintenance of these systems.

"Dripperline" or **"drip tubing":** The terms dripperline and drip tubing are utilized as part of the new specifications for drip dispersal proposed at N.J.A.C. 7:9A-10.8. A dripperline is a specific type of tubing that uniformly, through drip emitters, disperses treated wastewater. This proposed definition is consistent with the definition of this term used by the drip dispersal industry.

"Education/child care": This new term is used to describe one of the classes of activities in the new design criteria utilized to project design volume of sanitary sewage. This activity is

associated with facilities, or portions thereof, that educate or provide for activities to individuals, but provide for no overnight accommodations. These include, but are not limited to all levels of schools, colleges, vocational training centers, day care facilities and day camps.

"Existing ground surface" The Department is proposing to amend this existing definition to eliminate confusion between the term “existing ground surface” and the term “pre-existing natural ground surface”, which is proposed to be deleted. The confusion lies in how to apply various criteria for site evaluation to those sites that have been modified through human activity or are proposed for regrading as part of the system design. The Department has seen many examples of inappropriate designs due to this confusion, which has lead to approval of system designs by administrative authorities who either did not understand how to apply the criteria or relied on the licensed professional engineer’s certification of the design. Existing N.J.A.C. 7:9A-5.10, Disturbed ground, identifies that all site evaluation criteria for system design need to be applied at the level of the ground surface before filling activities or at the level of the remaining natural ground surface if the previous natural ground surface has been removed. As used in the proposed amended rules, the existing ground surface is the level of the ground prior to any manmade modification or disturbance. Eliminating the two terms and simply defining existing ground surface to be the level of the ground prior to any manmade modification or disturbance should remove the confusion while maintaining consistency within the chapter, including the various figures at Appendix A (for example, Figure 17).

“Failing system”: The Department is proposing to define failing systems as malfunctioning systems. As specified in proposed N.J.A.C. 7:9A-12.6(c), only the administrative authority and the Department may declare a system to be “failing” based on information provided by a septic inspector. The word “failing” is a term commonly used by the general

public to describe a malfunctioning system but is not defined in the existing rule. To avoid misinterpretation of what is meant by failing when describing a septic system and to clarify how use of this term relates to other terms defined in the rule, it is proposed to be incorporated into the definitions.

"Fill material" or "fill": The Department is proposing to amend this existing definition to specify that fill material must be naturally occurring and must not have been physically altered other than by sorting. There have been instances where people have attempted to consider man-made material (for example, crushed glass) or physically altered material (for example, blasted rock waste) to be appropriate for use in a system under this definition, simply because the material met the grain size analysis requirements in N.J.A.C. 7:9A-10.1(f). However, such material may or may not be appropriate for use based on its chemical and physical characteristics and how it will function as part of a septic system. Fill material appropriate for use in septic systems must behave in a manner similar to natural soil. Accordingly, the use of material that is not naturally occurring or that is physically altered will require a TWA to determine if the material is appropriate for use in septic systems. Naturally occurring material that meets the grain size requirements or can be sorted to meet the grain size requirements is the only acceptable material that can be approved under this chapter without a TWA. This proposed term will improve implementation of the rules.

"Flushing": This proposed new term is used in the new specifications for drip dispersal at proposed N.J.A.C. 7:9A-10.8. Flushing is the process in which dripperlines are cleaned to prevent the clogging of the emitters. Defining this new term is important to assure that the system design incorporates cleaning of dripperlines in accordance with the standards and therefore the drip dispersal system will continue to function as intended.

"Food service activities": This new term is used to describe one of the classes of activities in the new design criteria utilized to project design volume of sanitary sewage. This activity is associated with facilities, or portions thereof, that prepare or serve food. Systems serving these types of operations must be designed and sized appropriately to treat the high strength of the wastewater which includes a high concentration of dissolved solids, grease, and high biochemical oxygen demand. Such facilities are generally characterized by the presence of equipment that may result in the generation of a wastewater. Such equipment is typically used in food preparation and/or dish washing such as a high capacity dishwasher or multi-bay sink.

"Fueling position": This new definition refers to how many vehicles a vehicle service station can accommodate at one time in fueling activities and is used to determine the volume of sewage generated by people who use service station restrooms. Sanitary sewage generated from activities in service bays or retail operations associated with a vehicle service station are not included in the design criteria for fueling position and are additional criteria calculated from Table 7.4(a) for vehicle service stations that offers those additional amenities.

"General assembly activities": This proposed term is used to describe one of the classes of activities in the new design criteria utilized to determine design volume of sanitary sewage. The term includes activities that occur at facilities, or portions thereof, which provide areas of fixed or movable seating that may be used for gatherings of people. These facilities include, but are not limited to, religious facilities, all purpose rooms, stadiums, indoor or outdoor theatres, assembly halls, and airports.

"Individual subsurface sewage disposal system" or "ISSDS": The Department is proposing to modify the existing definition of individual subsurface sewage disposal system (ISSDS) to clarify that an individual subsurface sewage disposal system is a collection of

sanitary waste disposal components designed and constructed to treat sanitary sewage, retain solids and dispose of the liquid effluent which has been reduced in strength to levels typically observed in residential or domestic effluent from a septic tank. This change is necessary because the design criteria in the chapter were established based upon typical residential pollutant loading rates. Unfortunately, high rates of malfunction have been experienced by facilities discharging sewage many times stronger than what is considered typical residential or domestic waste. Waste strength is characterized by a number of physical characteristics such as suspended solids and biochemical oxygen demand. This modification is also consistent with the changes proposed for establishments generating quantities of grease, which contain significantly higher levels of pollutants due to the various properties of different types of fats, oils and grease, that are much higher at these facilities when compared to a typical residence and therefore include additional system components to treat for these pollutants to levels consistent with levels commonly associated with residential wastes. The changes are necessary to identify that an ISSDS may also include advanced wastewater pretreatment devices or drip dispersal systems. The term is interchangeable with the terms “onsite wastewater treatment system” and “system.”

“Manufacturer”: This proposed new term is used when discussing the requirements for systems that incorporate an advanced wastewater pretreatment device, products used in lieu of laterals and/or filter material, and drip dispersal systems. There are requirements for the manufacturer of proprietary advanced wastewater pretreatment and disposal technologies in the proposed amendments.

“Minimum drip dose volume”: This proposed new definition supports the new specifications for drip dispersal proposed at N.J.A.C. 7:9A-10.8. This term used by the drip dispersal industry to describe the volume of water necessary to pressurize and sustain the

pressure throughout the entire system. Minimum drip dose volume is commonly specified as a multiple of the total volume of the laterals in the drip dispersal system (for example, four times the volume of the piping network).

"NTU" or "Nepholometric Turbidity Units": NTU is a unit used by the advanced wastewater pretreatment device and/or drip dispersal industry as a unit to measure clarity. This measure is utilized in the observation, monitoring and reporting requirements for advanced wastewater pretreatment devices by authorized service providers during regularly scheduled maintenance visits as proposed in N.J.A.C. 7:9A-12.3.

"Onsite wastewater treatment system": This new definition is proposed in order to be consistent with the national trend of regulators and academics that use this generic term to describe all site specific treatment and disposal systems which include individual subsurface sewage disposal systems (ISSDS) that treat and dispose of smaller volumes of sanitary sewage. The term "individual subsurface sewage disposal system" is currently defined but is not used nationally. This new term will mean the same thing as individual subsurface sewage disposal systems (ISSDS) and can be used interchangeably.

"Pre-existing natural ground surface": The Department proposes to delete the definition and modify the term "existing ground surface" to eliminate confusion between the terms "existing ground surface" and "pre-existing natural ground surface".

"Private access restroom activities": This term is used in the proposed design criteria at Table 7.4(b) to describe the activity associated with sanitary sewage generation from toilets and sinks that occurs at facilities where the typical patron is staying at the establishment for more than one hour and the restrooms are not generally open to the public other than those patrons served. The types of establishments that would have private access restrooms include, but are

not limited to, bathhouses, bowling alleys, religious institutions, day camps, day schools, schools, colleges and swimming pools.

"Public access restroom activities": This term is used in the proposed design criteria at Table 7.4(b) to describe the activity associated with sanitary sewage generation from toilets and sinks that occurs at facilities where the typical patron is not staying at the establishment for more than one hour and the restrooms are generally open to the public. These include restrooms at highway rest areas, roadside comfort stations, visitor centers and restaurants (for customers and/or non-customers). This term is utilized as part of the activity-determined design volume calculation which is intended to assure that determination of the treatment system necessary to serve the projected size and type of flow is based upon more accurate projections.

"Real property transfer": The Department is proposing to define this term as the use of the proposed inspection protocol in N.J.A.C. 7:9A- 12.6 is triggered by this type of transaction Additionally, it is a real property transfer that triggers the proposed new requirement for the replacement of cesspools, privies, outhouses, latrines and pit toilets with a system in proposed N.J.A.C. 7:9A- 3.16.

"Return manifold": The term manifold is used in the new specifications for drip dispersal proposed at N.J.A.C. 7:9A-10.8. The return manifold is the pipe at the distal end of each lateral that aids in equalizing the pressure between laterals, provides an alternative pathway to bypass a lateral that may be obstructed and drains effluent remaining in the tubing after each pressurized event back to the distribution system.

"Septic system designer": The term septic system designer is currently described in N.J.A.C. 7:9A-3.17(b)3. The Department is proposing to delete the description from N.J.A.C. 7:9A-3.17(b)3 and define the term in the definitions section instead. The proposed new

definition is identical to the description of a septic system designer in the existing rule and requires that such a designer be a New Jersey licensed professional engineer.

"Septic system enforcement officer": The term septic system enforcement officer is currently described in N.J.A.C. 7:9A-3.17(b)1. The Department is proposing to delete the description from N.J.A.C. 7:9A-3.17(b)1 and define the term in the definitions section instead. The proposed new definition is identical to the description in the existing rule.

"Septic system inspector": The term septic system inspector is currently described in N.J.A.C. 7:9A-3.17(b)5. The Department is proposing to delete the description from N.J.A.C. 7:9A-3.17(b)5 and define the term in the definitions section instead. The proposed definition specifies that a septic system inspector utilizes the inspection protocol at N.J.A.C. 7:9A-12.6. The Department does not license or otherwise credential septic system inspectors. However, it intends to develop a web-based list of voluntarily registered inspectors that have certified they will use the Department's inspection protocol and reporting procedure specified in proposed N.J.A.C. 7:9A-12.6. 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.

"Septic system installer": The term septic system installer is currently described in N.J.A.C. 7:9A-3.17(b)4. The Department is proposing to delete the description from N.J.A.C. 7:9A-3.17(b)4 and define the term in the definitions section instead. The proposed new definition is identical to the description in the existing rule.

"Service contract": Pursuant to N.J.A.C. 7:9A-8.3, Advanced wastewater pretreatment components, and N.J.A.C. 7:9A-12.3, Maintenance and monitoring requirements for systems

incorporating advanced wastewater pretreatment devices, the owner of an advanced wastewater pretreatment device is required to have a service contract for the life of the system. The service contract is defined as a legal written agreement with an authorized service provider for start-up, maintenance and monitoring of the system. The service contract is important to assure that the system is monitored and maintained so that it functions as designed, in accordance with manufacturer requirements and recommendations.

"Sink station activities": Sink station activities is one of the categories of activity used in the new design criteria for calculating design volume. The proposed definition identifies the activities that can generate wastewater from activities, such as hair styling at beauty salons and parlors, and custodial and janitorial slop sinks.

"Single residential occupancy activities": Single residential occupancy activities is one of the categories of activity used in the new design criteria for calculating design volume. This term identifies those activities that occur at individual or multifamily residences. These residences include, but are not limited to, single family homes, apartments, condominiums, townhouses and duplex homes.

"Site evaluator": The term site evaluator is currently described in N.J.A.C. 7:9A-3.17(b)2. The Department is proposing to delete the description from N.J.A.C. 7:9A-3.17(b)2 and define the term in the definitions section instead. The proposed new definition is identical to the description in the existing rule.

"Structure": The Department is proposing to define the term "structure" by reference to the definition of the same term in the Realty Improvement Sewerage and Facilities Act (1954) at N.J.S.A. 58:11-25a, Definitions. The definition is proposed to be added since the term "realty improvement" (which is defined in N.J.S.A 58:11-24, Definitions as any "proposed new

residence or other building"), is proposed to be replaced in applicable places within the rule with the term "structure" since "realty improvement" refers only to proposed new structures such as a residence or building. The definition of "structure" in N.J.S.A 58:11-24 includes all building in which the facilities (activities) generate less than 2,000 gpd of sanitary sewage. This proposed term will address existing buildings served by a septic system.

"Supply manifold": A supply manifold is part of a system that must comply with the new specifications for drip dispersal proposed at N.J.A.C. 7:9A-10.8. The supply manifold is the pipe at the end of the lateral that provides the dripperline with effluent that is ready to be dispersed.

"System": The definition of the term "system" is proposed for amendment to specifically exclude cesspools, privies, latrines, pit toilets, outhouses, piped discharges to water courses or the ground surface, and illegally constructed or altered treatment or disposal mechanisms since they are inconsistent with the definition of ISSDS which includes a collection of components including a septic tank. These changes are consistent with proposed amendments at N.J.A.C. 7:9A-1.6(g) which prohibit these antiquated units because they do not provide primary treatment of sanitary sewage. These changes are also consistent with the existing rule text at N.J.A.C. 7:9A-1.6(d) which prohibits direct discharges of effluent into water courses or to the ground surface. Further, in an effort to curtail illegal construction, alteration and repair of systems and in support of the existing rule text at N.J.A.C. 7:9A-1.6(a) which requires proper permits for installation, construction, alteration or repair of a system, and the existing requirements of N.J.A.C. 7:9A-3.13 which requires certification of system installation and alteration by the administrative authority prior to operating that system, the Department is clarifying that illegal construction and alteration activities effectively negate the existence of a valid system.

Composting or waterless toilets are also excluded from this definition as these devices do not discharge into a disposal field. If a person wants to use a composting or waterless toilet, such devices are referred to in the existing N.J.A.C. 7:9A-7.5; however, waterless toilets are not regulated under this rule, but are referred to the Uniform Construction Code, N.J.A.C. 5:23-3.15.

"System integrator": A system integrator is a company or an individual authorized by the company that must comply with the new specifications for drip dispersal proposed at N.J.A.C. 7:9A-10.8. A system integrator is responsible for pre-engineering a generic package system containing advanced wastewater pretreatment, headworks, pumps, tanks, drip tubing and all the other necessary parts of a drip dispersal system and prepares documentation on how to design, install, operate and maintain that system. System integrators may be a manufacturer of those products or a delegated individual that is responsible for the overall management of those pre-engineered drip dispersal system designs. The system integrator is required to provide documentation that demonstrates that any installer or service provider working with drip dispersal systems is authorized to work with those proprietary products and designs.

"Treatment works approval": The Department is proposing to replace the existing definition of treatment works approval (TWA) with a definition identical to that of the same term at N.J.A.C. 7:14A. This proposed amendment will resolve the inconsistency of the term between the two rules. The change in the definition will not affect the review or issuance of treatment work approvals.

"Volume of sanitary sewage": This existing definition is proposed to be modified in recognition of the proposed new Tables at N.J.A.C. 7:9-7.4(a) and 7.4(b) at N.J.A.C. 7:9A-7.4, Design Criteria, which uses gallons as the unit for daily volume of sanitary sewage. Since the existing rule uses gallons per day as the unit when referring to the volume of sanitary sewage

(although it is a rate unit) in the method of estimation in the proposed deleted table at N.J.A.C. 7:9A-7.4(d) as well as other places throughout the rules not proposed to be modified, the Department finds it important to not only include the units proposed to be used in the new method of calculating design volume, but also to clarify that the existing unit used (gallons per day) may be used for expressing volume not just the rate of volume generated for the purpose of this chapter. Since gallons per day is a rate unit and the existing definition, as well as the term used throughout the rule, is referring to the volume, not rate of production of the volume, the Department believes it is important to clarify the uses of the term. The addition of the term "sanitary" to describe sewage in the definition is proposed to be added to be consistent with the use of this term throughout the rule.

"Water course": The Department is proposing to amend the definition of water course to incorporate the existing footnote (1) at N.J.A.C. 7:9A-Table 4.3 which specifies that water courses include subsurface drains with above-ground or surface water outlets into the definition and to expand the definition to include wetlands as a "water course" for the purposes of this chapter. The addition of the word "wetlands" clarifies that minimum separation distances to water courses must be maintained to wetlands to minimize any potential human health hazards associated with discharging sanitary sewage wastes through a septic system located near wetlands. While many conventional pollutants are treated to sufficient levels in the soils surrounding onsite wastewater treatment systems, viruses and pathogens can travel much longer distances. If these pollutants are exposed at the ground surface, such as in wetlands, without adequate treatment achieved by the effluent moving through the subsurface soils, protection of human health is compromised. The proposed change will assure that human health is protected

and is consistent with the definition of "Waters of the State" in other Department rules such as N.J.A.C. 7:7A, Freshwater Wetlands Protection Act Rules.

"Water service line": Subsurface water service lines are subject to minimum separation distances in N.J.A.C. 7:9A-4.3. The Department is proposing a definition specifying that this term includes all subsurface water service lines, not only subsurface potable water service lines. It is necessary for all subsurface water service lines to meet and maintain the appropriate minimum separation distance requirements in N.J.A.C. 7:9A-4.3 because introduction of water into the ground in the area of a system, whether potable or not, can impact the performance of a system. For example, installation of irrigation lines and leaking underground irrigation conduit has led to problems with the proper functioning of systems.

"Waters of the State": The Department is proposing to amend this existing definition to indicate that wetlands are considered to be waters of the State. The proposed amendment will make the definition of this term consistent with the definition of the same term in the Freshwater Wetlands Protection Act Rules, N.J.A.C. 7:7A. This amendment is also consistent with the amendments to the definition of "water course" and assures that minimum separation distances to wetlands will be met as discussed above in the summary of the definition for "water course".

Subchapter 3. Administration

Subchapter 3 contains the requirements for the permitting and proper use of ISSDSs, the role, responsibilities and authority of the administrative authorities as the review and permitting agencies, and details on administrative procedures. The Department is proposing to make the following changes to Subchapter 3.

N.J.A.C. 7:9A-3.2: New system design approvals (Proposed heading: New systems)

N.J.A.C. 7:9A-3.2 specifies the general requirement that all aspects of individual subsurface sewage disposal systems must comply with the requirements of this chapter. The Department is proposing to amend this section to make clear that all systems that obtain Department approvals, such as TWAs, must not only comply with the standards contained in this chapter, but also with all conditions specified in that approval. When TWAs are issued, they will contain specific requirements for proper operation, inspection, and routine maintenance, which will ensure the proper functioning of the system covered by that approval. These approvals will also contain mandatory administrative conditions for the applicant that must be implemented. Performance of these conditions is enforced by the administrative authority. These conditions require reporting to the administrative authority, renewing service contracts and other conditions that may be necessary to ensure effective operation of the program. The proposed amendment reiterates and amplifies that compliance with all approval conditions is mandatory.

The Department is also proposing to amend this section to make clear that the operation of a facility is considered to include maintenance of the system. Pursuant to N.JA.C. 7:9A-3.14, the administrative authority is required to notify all new and existing owners of systems of operation and maintenance practices for their system. The proposed amendment to N.JA.C. 7:9A-3.2 is consistent with this requirement and assures that new systems will continue to work as designed. The Department is proposing to remove repair and alteration from this section since these actions are taken on existing systems, not new systems. Accordingly, the requirements repair and alterations are specified in N.J.A.C. 7:9A-3.3 and 3.4.

Finally, the Department is additionally proposing to amend the section heading to delete "design approvals" to more accurately reflect the section’s content. Specifically, the section

covers how new systems must comply with the standards in the rule; it is not limited to the approval of designs.

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

N.J.A.C. 7:9A-3.3 explains when a pre-existing system can continue to be used and when the administrative authority may approve a change in use or expansion of an existing system that will increase the estimated volume or type of sanitary sewage. N.J.A.C. 7:9A-3.3 additionally specifies when the administrative authority may approve the alteration or repair of an existing system. The Department is proposing to repeal the existing section and replace it with a reorganized section. Changes proposed to what is currently contained in N.J.A.C 7:9A-3.3 are described below.

N.J.A.C. 7:9A-3.3(a) currently allows existing systems to continue to be used without change provided that the system is not malfunctioning. Proposed N.J.A.C. 7:9A-3.3(a) continues to provide that the system can continue to be utilized if it is not malfunctioning, as "malfunctioning" is defined in these proposed amendments at proposed N.J.A.C. 7:9A-3.4. The Department is proposing to amend this provision to allow for the continued use of systems that are compliant with the conditions upon which they were approved. Also, the Department is proposing to clarify that the existing system must serve an existing structure. This change will make clear that this subsection is not applicable to situations in which a structure is removed and replaced with a different structure and the owner plans to use the system that was designed for the previous structure to serve the new structure. Problems may arise when the uses of the new structure generate more volume or higher strength waste then the original system was designed to handle, treat and dispose of.

Any structure that must be demolished or otherwise reconstructed must upgrade the existing system to current requirements and to the appropriate size based on the proposed use of the new structure pursuant to proposed N.J.A.C. 7:9A-3.3(b). The Department is proposing to expand N.J.A.C. 7:9A-3.3(b) to specify that existing systems are not allowed to continue to be used if there is a proposed change in use or expansion of the structure that changes the type of wastewater generated or increases the volume of wastewater generated. This assures that the existing system approved and constructed for a specific volume and strength of wastewater will continue to work as intended. In the case of a change in use or expansion of the structure, the requirements of N.J.A.C. 7:9A-3.3(c) and (e) apply (as described below). The Department is proposing to describe in N.J.A.C. 7:9A-3.3(b) the conditions under which an administrative authority may approve use of an existing system to serve a proposed realty improvement or an existing structure that is being reconstructed. To avoid the administrative authority having to interpret what would be considered reconstruction, the Department is proposing to use the definition of reconstruction in the Uniform Construction Code, N.J.A.C. 5:23 to assure consistency with local construction officials' understanding of reconstruction since they cannot receive construction permits until the administrative authority signs off that the system is designed up to this code. Proposed N.J.A.C. 7:9A-3.3(b) specifies the conditions which a proposed new structure must meet to continue to utilize an existing system. Particularly, to qualify for continued use, the existing system must be in conformance with the chapter or able to be altered to be in conformance with the chapter. The proposed changes include two potential situations in which the administrative authority may approve continued use of the existing system despite the fact that all aspects of the system do not comply with the current rules. Particularly, an existing system may be allowed to serve a reconstructed structure when the

reconstruction of a pre-existing structure is required as a result of a catastrophic event, such as fire, flood or severe weather, or when the existing system was approved after the last significant update of the rules, August 18, 1999. Even if a system qualifies under one of the two proposed waivers, the system still must be certified by a septic system designer to be functioning as intended and not exhibit any condition representative of a malfunctioning system and adequately sized to treat and dispose of the estimated volume of sanitary sewage that will be generated by the realty improvement or reconstructed structure. These conditions assure that if an existing system is in adequate working condition and is properly designed for the proposed structure (and will therefore be protective of human health and the environment), it may continue to be used without having to upgrade to the current proposed standards. If there is no system on the site, the system is damaged due to the catastrophic event, or the system is otherwise noncompliant in accordance with of N.J.A.C. 7:9A-3.4, the applicant would have to adhere to the requirements of the chapter.

Proposed N.J.A.C. 7:9A-3.3(c) allows the use of an existing system when an owner proposes to change the use of a structure that will change the estimated volume or type of sanitary sewage as long as it is demonstrated by proper documentation that the existing system is properly designed to adequately treat and dispose of the estimated volume of sanitary sewage and the type of wastewater generated. It is also required that the existing system not be malfunctioning. Two forms of documentation that are acceptable to assure the existing system is appropriately sized and designed to treat and dispose of the estimated volume and type of sanitary sewage after the expansion or change in use of the existing structure are either prior approval from the administrative authority or the Department that contains sufficient information to demonstrate that the existing system will be adequate or a certification from a septic system

designer that demonstrates adequacy of the existing system to serve the structure after expansion or change in use. These forms of documentation will serve to assure the administrative authority that all design aspects and components of the system are suitable to treat and dispose of the wastewater proposed to be sent to the existing system. This documentation also serves to assure the administrative authority that the estimated volume and strength of the wastewater generated from a change in use or expansion of the structure being served by the existing system will not exceed the hydraulic or treatment capacity of the existing system.

The Department is proposing to modify the requirements in existing N.J.A.C. 7:9A-3.3(g) and relocate them to proposed N.J.A.C. 7:9A-3.3(d) to provide that repairs to existing system components must be made in a manner that preserves and restores the originally approved design and any components that are replaced of the approved existing system are replaced in kind. Existing N.J.A.C. 7:9A-3.3(g) includes an exception for repairs to cesspools. This exception is not proposed to be incorporated into N.J.A.C. 7:9A-3.3(d), but has been moved to proposed N.J.A.C 7:9A-3.16 which regulates cesspools and other antiquated sanitary sewage disposal units. A repair is a replacement in kind (as opposed to an alteration, which is addressed in N.J.A.C. 7:9A-3.3(e)). When the repair is to fix a malfunctioning or otherwise non-compliant system, proposed N.J.A.C. 7:9A-3.3(d)1 requires that the repair must not only eliminate the cause of the malfunction or noncompliance, but also ensure that the system, with proper operation and maintenance, will not result in future non-compliance. If the disposal field requires repair, proposed N.J.A.C. 7:9A-3.3(d)2 requires that a septic system designer certify that the proposed repair will adequately treat and dispose of the estimated volume and type of sanitary sewage and adequately remedy the cause of the malfunction. In such a situation, final as-built drawings of the system must be filed with the administrative authority if the septic

system designer identifies any inconsistencies from original system design that is on file with the administrative authority or if the administrative authority does not have original drawings on file.

When an existing system needs to be altered from its original approved configuration, proposed N.J.A.C. 7:9A-3.3(e) requires, with limited exceptions, that the proposed altered system meets the requirements of a new system specified in N.J.A.C. 7:9A-3.2. Proposed N.J.A.C. 7:9A-3.3(e) additionally includes the conditions currently applicable to alterations to an existing system that may be approved by the administrative authority. These conditions are currently codified at N.J.A.C. 7:9A-3.3(d), and include the requirement that those alterations that require the design of a professional engineer, in accordance with N.J.S.A. 45:8-27 et seq. and the rules adopted pursuant thereto, N.J.A.C. 13:40, must include plans and specifications reflecting the alterations signed and sealed by a septic system designer. Further, any alteration(s) that cannot meet the requirements of this chapter and are not necessitated due to an increase in the estimated volume, change in type of sanitary sewage generated or are required to fix a malfunction must be made in such a way as to come as close to conformance with the chapter as determined by the administrative authority. This requirement applies to voluntary alterations that are not necessitated by a change in the structure or a malfunction. Proposed N.J.A.C. 7:9A-3.3(e) additionally incorporates at paragraph (e)2 the existing requirement that alterations be made in such a way to eliminate the cause of a malfunction and prevent future malfunction with proper operation and maintenance and to bring the system into conformance with the requirements of the chapter. The Department is proposing at N.J.A.C. 7:9A-3.3(e)2ii that, if the alteration to correct the malfunction cannot bring the system into conformance with the chapter and eliminate the cause of the malfunction, in a manner that is protective of human health and the environment, and it must come as close to conformance with the chapter as determined by

the administrative authority. In the case where an altered system cannot be brought into close conformance sufficient to satisfy the administrative authority, proposed N.J.A.C. 7:9A-3.3(d)2ii requires application to the Department in accordance with N.J.A.C. 7:9A-3.12(b) for the use of a holding tank.

The proposed deletion of existing N.J.A.C. 7:9A-3.3(f), (h) and (i) will remove from this section of the rules the conditions related to discharges to groundwater that are regulated under the New Jersey Pollutant Discharge Elimination System (NJPDES) rules, N.J.A.C. 7:14A. This includes the requirement for administrative authorities to approve alterations to malfunctioning systems receiving greater than 2,000 gpd and those serving more than one property (found in existing N.J.A.C.7:9A-3.3(f)), as well as the requirement of owners to apply for a NJPDES permit for industrial discharges (existing N.J.A.C.7:9A-3.3(h)), and community systems (existing N.J.A.C.7:9A-3.3(i)). These proposed deletions will prevent confusion regarding the oversight of these systems since the Department already regulates them through N.J.A.C. 7:14A. To further clarify the relationship between these two rules, proposed N.J.A.C. 7:9A-1.2(b) and 1.8 refer to the appropriate permits under N.J.A.C. 7:14A for these systems. These changes do not affect the ability of septic system enforcement officers or other health officials to carry out their statutory duties to protect human health from nuisance or immediate and dangerous conditions. For example, although the administrative authority may not approve the repair or alteration of a malfunctioning NJPDES regulated system with a design flow of greater than 2,000 gpd, it may direct the owner and/or operator of that system to cease the discharge, and collect and haul the wastewater until the necessary alterations have been made under the authority of a State NJPDES permit. In the past, administrative authorities have been able to approve repairs to

these systems if the systems were malfunctioning. These proposed deletions will assure that systems subject to NJPDES regulations will be regulated under that program.

N.J.A.C. 7:9A-3.4: Malfunctioning systems (Proposed heading: Non-compliant systems)

The Department is proposing amendments to N.J.A.C. 7:9A-3.4 to regulate all "non-compliant" systems. Non-compliant systems include both malfunctioning systems, currently regulated under this section, and systems that fail to comply with requirements of the chapter and approvals, such as a local permit or a Department issued treatment works approval. The proposed amendments assure that all systems that are not performing as designed or are, for any reason, not in compliance with the chapter, and thus creating a risk of contamination to the environment, are fully addressed. By assuring the appropriate oversight and correction of non-compliant systems, the proposed amendments, in conjunction with the rest of this chapter, assure that the administrative authority can properly monitor and direct the use, maintenance and management of all systems.

In order to reflect the expanded coverage of this section, the Department is proposing to change the section heading from "Malfunctioning systems" to "Non-compliant systems" and is also proposing to specify when systems are considered to be non-compliant in proposed N.J.A.C. 7:9A-3.4(a). As indicated above, N.J.A.C. 7:9A-3.4(a) specifies that "non-compliant systems" include both malfunctioning systems and systems that are not constructed, operated or maintained in accordance with the requirements of this chapter or the conditions of any approval, regardless of whether the systems are currently malfunctioning.

The Department is proposing to re-codify existing N.J.A.C. 7:9A-3.4(a) as N.J.A.C. 7:9A-3.4(b). This provision identifies when an individual subsurface sewage disposal system is malfunctioning. It is proposed that this subsection be amended to include two new paragraphs.

Proposed N.J.A.C. 7:9A-3.4(b)5 specifies that any leakage from, or into, any system components not designed to emit sanitary sewage or effluent constitutes a malfunctioning system. Proposed N.J.A.C. 7:9A-3.4(b)6 provides that discharges where no zone of treatment is present, such as where saturated soil is present in the zone of treatment, as is the case where the bottom of a seepage pit is below the water table, are indicative of a malfunctioning system. Sanitary sewage leaking from septic tanks and distribution boxes, and improperly treated sanitary sewage when there is no zone of treatment are known causes of ground water contamination. While indicators of a system malfunction, including the new provisions, can be observed, the observations are merely indications of a potential "malfunction" or "failure" until the administrative authority or the Department determines whether an actual system malfunction exists. Moreover, in the process of reviewing a potential "malfunction", the Department and the administrative authority are not limited to the itemized indicators of this section in making its determination. Instead, as stated in the introductory paragraph of N.JA.C. 7:9A-3.4(b), the list is not all-inclusive and other indicators of a system's condition, such as current site usage, case history and personal site or area knowledge, can be considered.

Existing N.J.A.C. 7:9A-3.4(b)1 in part requires the owner to immediately notify the administrative authority when the owner detects a condition indicative of a system malfunction. The Department is proposing to relocate this requirement to proposed N.J.A.C. 7:9A-3.4(c) with modification to reflect the proposed change to this section to address all non-compliant systems and not just malfunctioning systems. The proposed new subsection continues to require that the owner or owner's agent immediately notify the administrative authority upon detection of anything that may be indicative of a non-compliant system. This requirement continues to be important in assuring that upon knowledge of the owner or owner's agent, all potential

malfunctions are immediately brought to the attention of the administrative authority for appropriate evaluation and action to assure any environmental impacts are minimized.

Existing N.J.A.C. 7:9A-3.4(c) and (d), which specify when and under what conditions the administrative authority may approve the use of a holding tank, are proposed to be re-codified as the proposed new N.J.A.C. 7:9A-3.4(h) and (i). No changes in text are proposed. The Department is proposing to add a reference to the existing text proposed to be recodified at N.J.A.C. 7:9A-3.4(h) to point readers to N.J.A.C. 7:9A-3.4(i) to make clear where the requirements are located if the administrative authority wants to approve a permanent holding tank. Similarly, in the requirements at N.J.A.C. 7:9A-3.4(i)3, the Department has provided a cross reference to N.J.A.C. 7:9A-1.6(e) to identify how it is established that public sewers are not available.

The Department is proposing a new N.J.A.C. 7:9A-3.4(d). This proposed subsection describes the responsibilities of the administrative authority when it becomes aware of the existence of a potentially non-compliant system. Particularly, the administrative authority must take all actions necessary to determine if the system is non-compliant. There are a number of ways that the administrative authority could become aware of a potentially noncompliant system such as information from a homeowner or a system inspector. The proposed subsection also provides that only the administrative authority or the Department may declare a system "non-compliant." The new subsection makes clear it is not within the authority of a person conducting septic system inspections, other than the Department or administrative authority, to make official determinations. Persons conducting system inspections may report facts, observations, or concerns as part of an inspection, which will be submitted to the appropriate agency for an appropriate response. Historically, when a system inspector declared the system malfunctioning

or failing, a finding which was beyond his or her authority, this led to confusion and complications regarding the necessary or appropriate methods to remediate what the inspector believed to be a problem with the system. The Department is aware of many situations where the owner's hired inspector and a buyer's hired inspector have disagreed on their interpretations of the state of the system and recommended remedies. To avoid conflicts with inspectors' interpretations, the Department is proposing to require that only the regulators may make such determinations and suggest solutions.

As indicated above, the Department is proposing to incorporate into proposed N.J.A.C. 7:9A-3.4(c) the reporting requirements of existing N.J.A.C. 7:9A-3.4(b)1. The Department is proposing to recodify the remainder of existing N.J.A.C. 7:9A-3.4(b)1, 2, and 3 to N.J.A.C. 7:9A-3.4(e). Proposed N.J.A.C. 7:9A-3.4(e) requires the owner of a non-compliant system to take immediate steps to correct the non-compliant condition. Proposed N.J.A.C. 7:9A-3.4(e)1 continues the obligation currently contained in N.J.A.C. 7:9A-3.4(b)1 which makes it clear that it is the owner’s responsibility to obtain approval from the administrative authority or its authorized agent for any repairs or alterations made. Proposed N.J.A.C. 7:9A-3.4(e)2 contains the requirements currently codified at N.J.A.C. 7:9A-3.4(b)2 which details the limited circumstances where alterations may be approved based upon plans and specifications prepared by a septic system installer rather than a septic system designer. Finally, proposed N.J.A.C. 7:9A-3.4(e)3 provides specifications for when use of a system must be ceased or the circumstances under which certain components of an existing system can be used as temporary holding tanks until repairs or alterations are completed.

The Department is proposing a new N.J.A.C. 7:9A-3.4(f) to be consistent with the new proposed inspection protocol in N.J.A.C.7:9A-12.6, System inspection protocol for real property

transfers, and N.J.A.C. 7:9A-3.4(d). This proposed new subsection refers specifically to the administrative authority's response to inspection reports submitted to it during a real property transfer inspection. The proposed new subsection requires the administrative authority to respond in a timely manner to a non-compliant condition identified in a septic inspection report, conducted and submitted in accordance with proposed N.J.A.C. 7:9A-12.6. The 10 business day timeframe for the administrative authority's response to a potentially non-compliant system identified during a real property transfer does not preclude an immediate response to abate a reported public health threat. The requirements of the administrative authority to investigate and determine whether a system is non-compliant in N.J.A.C. 7:9A-3.4(d) are still applicable to these reporting and response requirements. The 10-business day requirement for administrative authorities assures that transfer is not unnecessarily delayed, but gives the administrative authority enough time to review the inspection results.

Proposed N.J.A.C. 7:9A-3.4(g) requires that grease removal systems be upgraded at all facilities that conduct food service activities when their septic systems malfunction. The upgrade must be done in accordance with the proposed amendments at N.J.A.C. 7:9A-8.1. This requirement is in response to the high rate of malfunctioning septic systems at food service establishments and supports the proposed amendments at N.J.A.C. 7:9A-8.1. The failure of these systems is typically due to the stronger than residential strength wastes being discharged. There is a need for additional pretreatment to reduce the strength of this waste to make it more appropriate for disposal in a septic system. Rather than require all food service establishments to upgrade grease removal systems immediately, new systems and systems proposed for expansion will be required to comply with these new Standards when they are designed. Existing systems will only be required to upgrade if they experience a malfunction.

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

N.J.A.C. 7:9A-3.5 specifies that a permit is required to construct, install or alter a system. The Department is proposing to expand the list of activities requiring a permit at N.J.A.C. 7:9A-3.5(a) to clarify that repairs to an individual subsurface disposal system also require a permit, as currently specified at N.J.A.C. 7:9A-1.6(a). As has always been the case, the administrative authority must approve all construction, installation, alterations and repairs to individual subsurface sewage disposal systems through a permit. Since repairs to systems are replacements in-kind of the one or more of the original components of a system, there has been confusion regarding whether the administrative authority needs to approve the repair. Administrative authority review of proposed repairs is necessary to assure consistency with the originally approved system, that the repair will be in conformance with this chapter and will not be an alteration which would require a more thorough review. The proposed amendment will make this section consistent with and will reinforce the requirement at N.J.A.C. 7:9A-1.6(a), and eliminate any possible confusion regarding the need to obtain a permit for repairs.

Existing N.J.A.C. 7:9A-3.5(c) requires an application for a permit and specifies the required contents of an application to the administrative authority. One of these requirements is that the plans for repairs be signed and sealed by a licensed professional engineer (proposed to be changed to “septic system designer” to reflect the proposed definition of this term, which specifies that a septic system designer must be a New Jersey licensed professional engineer), except where an existing system is repaired or altered without a change that would constitute the practice of professional engineering as defined by N.J.S.A. 45:8-28(b). N.J.A.C. 7:9A-3.5(c) currently references the above exception to this requirement, which is codified at existing N.J.A.C. 7:9A-3.3(d)1. The Department proposes remove the reference to N.J.A.C. 7:9A-

3.3(d)1 since that exception is proposed to be incorporated in the proposed amendments at both N.J.A.C. 7:9A-3.3(d) and (e)

N.J.A.C. 7:9A-3.5(c)1 is proposed to be updated to reflect the Soil Conservation Service's new title, the Natural Resource Conservation Service (NRCS). It is also amended to remove the current exception to the application requirement of submitting the soil survey maps for Essex and Hudson Counties because those maps are now available. Therefore, all applications, including those proposed for Essex and Hudson counties, must include a photo-copy reproduction of either the U.S.G.S. quadrangle or U.S.D.A soil survey map.

The Department is proposing at N.J.A.C. 7:9A-3.5(c)2 to require full build-out plans as part of the application for a property that is part of a common plan of development or sale. N.J.A.C. 7:9A-1.8(a)1 does not allow administrative authorities to approve systems where the maximum expected daily volume of sanitary sewage is greater than 2,000 gpd on a property. Therefore, administrative authority approval of an application for a property resulting in a total, final estimated volume of sanitary sewage greater than 2,000 gpd, would be a violation of this requirement. Proposed N.J.A.C. 7:9A-3.5(c)2 will assure that all activities generating sanitary sewage on the property for this type of development will be taken into account when the administrative authority reviews the application. As a result of the proposal of N.J.A.C. 7:9A-3.5(c)2 , the Department is proposing to recodify existing N.J.A.C. 7:9A-3.5(c)2 through 8 as N.J.A.C. 7:9A-3.5(c)3 through 9.

Proposed N.J.A.C. 7:9A-3.5(c)7 includes requirements currently codified at N.J.A.C. 7:9A-3.5(c)6 and adds the requirement that the maximum expected daily volume of sanitary sewage for a property that is part of a larger planned project (common plan of development or sale) be calculated to project this volume after the completion of the common plan of

development or sale. A proposed project in which the activities will generate an estimated daily volume of sanitary sewage greater than 2,000 gpd requires review under N.J.A.C. 7:14A-7. By requiring the estimation of volumes of sanitary sewage based upon full build out of the project, compliance with all applicable rules can be reviewed prior to any construction. This amendment will assure that projects which will ultimately result in sanitary sewage volumes greater than 2,000 gpd will not escape the appropriate review merely because they were constructed in phases.

As a result of the proposed amendment to the definition of system in N.J.A.C. 7:9A-2.1, the Department is proposing deletion of the word "sewage" from proposed N.J.A.C. 7:9A-3.5(c)9 (currently codified at N.J.A.C. 7:9A-3.5(c)8).

The Department is proposing to add a new N.J.A.C. 7:9A-3.5(e). This proposed new subsection requires approvals issued by administrative authorities to include an expiration date that may not exceed five years. This change will assure that, if a system is not constructed within five years, the person seeking to construct the system will need to apply for a new permit and will not continue to be able to rely indefinitely on an approval which may have been based upon science that is out of date by the time the system is constructed and not sufficiently protective of public health and the environment. This will help ensure that systems are constructed in accordance with a permit that was issued based on current standards determined to adequately protect public health and the environment.

Proposed N.J.A.C. 7:9A-3.5(f) addresses those situations where the administrative authority issues an approval and later receives information that conflicts with the original application or otherwise contradicts information that was used as part of the basis for the approval. This proposed new subsection requires the administrative authority to order the

cessation of any work on the system until it determines the accuracy of the new information. If the administrative authority verifies the new information, the proposed section requires that it should either instruct the applicant to institute remedial measures or rescind the approval. In both cases, the applicant would have to reapply with the accurate information represented and accounted for in the design. For example, if the administrative authority receives information from the inspection of a neighboring property that the neighboring well is uncased and the application that was approved for the system has taken a separation distance reduction because the plans showed a cased well is present on the neighbor's property, the administrative authority would require the construction of the system to cease until the details about the neighboring well are confirmed. In this case, if confirmed correct, the administrative authority would then either request a redesign of the system to provide an appropriate separation distance or the installation of a new well on the neighboring property that is properly cased. This requirement does not apply in situations where field modifications (see N.J.A.C. 7:9A-3.7, Modification of plans) that would be captured on an as-built must be made (and are certified by the septic system designer).

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

The Department has two TWA programs, both under regulatory administration of N.J.A.C. 7:14A; one that is issued pursuant to this chapter (for systems under 2,000 gpd) and the other one part of the NJPDES program (greater than 2,000 gpd) under N.J.A.C. 7:14A. The TWA program under NJPDES that handles wastewater discharges to onsite systems covers onsite systems that serve industrial facilities as well as all facilities that generate sanitary sewage greater than 2,000 gpd. The primary objective of the TWA programs is to prevent degradation of the waters of the State due to inadequately designed and/or poorly operated wastewater treatment and disposal facilities. The TWA programs regulate the construction and operation of domestic

and industrial wastewater collection, conveyance and treatment systems. In general, TWA permits are required for building, installing, operating or modifying domestic and industrial treatment works including sewer extensions, sanitary sewage treatment systems, holding tanks, equalization tanks, residual treatment units and wastewater treatment and recycling systems. Certain treatment works are exempt from obtaining a TWA, including individual subsurface disposal systems that are constructed in full conformance with the requirements of N.J.A.C. 7:9A. The TWA program under this chapter provides the mechanism that enables the Department to review design plans that include aspects that do not conform to the Standards.

The Department is proposing to revise the existing TWA program for new or expanded systems designs that do not conform with N.J.A.C. 7:9A. Existing N.J.A.C. 7:9A-3.9, consisting of (a) through (c), is proposed to be repealed and replaced with a new N.J.A.C. 7:9A-3.9, consisting of subsections (a) through (i). The reorganization and expansion of this section better describes how the TWA process works for septic system approvals, the role of the administrative authority in directing an applicant to apply for a TWA, and the circumstance when the Department will not issue a TWA. Particularly, the Department will not issue a TWA for proposed systems in areas prone to surface flooding or where the proposed system would not be in conformance with another regulation or local ordinance. The proposed section incorporates aspects of the existing N.J.A.C. 7:9A-3.9(a) through (c) and adds new provisions as described in more detail below.

Proposed N.J.A.C. 7:9A-3.9(a) lists situations for which a treatment works approval under this chapter is required. While the Department has determined that systems constructed in accordance with the requirements of this chapter will provide appropriate protection of water quality, the same is not true in situations in which the project will deviate from the standards of

the chapter. As a result, it is necessary for the Department to assure that any variance from the requirements of this chapter in design or construction of systems discharging less than 2,000 gpd will not result in a discharge that has unacceptable impacts on human health or the environment. Accordingly, it is proposed that treatment works approvals will be required for sewerage facilities certifications pursuant to N.J.S.A. 58:11-25.1 of 50 or more realty improvement ("50 or more") projects where each structure in the proposed development would be discharging to an ISSDS, which are further addressed in the existing rule text and proposed amendments at N.J.A.C. 7:9A-3.18, as well as for nonconforming aspects of system designs.

Proposed N.J.A.C. 7:9A-3.9(a)1 specifies that a TWA is required where a Department certification is mandated pursuant to N.J.S.A. 58:11-25.1. The law does not, however, specify how the Department shall review these certifications or process the applications. The Department is proposing to change and expand the application requirements in N.J.A.C. 7:9A-3.18, Requirements for certification of sewerage facilities, to be consistent with the requirements of a TWA application. The Department is proposing to incorporate the existing certification application process into the existing TWA process to avoid duplication, enhance the structure of the existing program and streamline the process. Currently, the certification process requires preliminary subdivision plans consistent with an accompanying nitrate dilution model and the resulting calculated maximum number of homes over the parcel. The existing certification assures that there is enough land area to properly treat and dilute the nitrate from the development. Since the TWA program incorporates a fee calculation, this proposed inclusion of 50 or more certification into the TWA program will also sustain this certification program which currently does not collect fees for the review provided.

Proposed N.J.A.C. 7:9A-3.9(a)2 incorporates the existing requirement at N.J.A.C. 7:9A-3.9(b)1 and 2 requiring a TWA for the design of a system which will not conform to the chapter. The proposed requirement specifies that this is a requirement for both new and expanded systems, which, for the purposes of the requirements of the chapter are treated as new systems.

Proposed N.J.A.C. 7:9A-3.9(a)3 incorporates the existing requirement at N.J.A.C. 7:9A-3.9(b)3 that any design that incorporates unproven or otherwise experimental technology requires a TWA. The proposed new language changes the reference to "technology" to "experimental system or component" to be consistent with the proposed defined new term, "component" and to avoid confusion with the new requirements for technology such as advanced wastewater pretreatment components and disposal/ dispersal technologies. The proposed new paragraph references N.J.A.C. 7:9A-3.11, the rule section on experimental systems.

Proposed N.J.A.C. 7:9A-3.9(a)4, which is continued from existing N.J.A.C. 7:9A-3.9(b)4, requires that any system that incorporates wastewater treatment in order to meet effluent limitations prescribed by another regulation or statute receive a TWA. This requirement refers to situations where effluent limitations exist, such as in the Pinelands, and, to meet those limits, treatment technologies might be necessary which are not approvable under the chapter. This requirement is consistent with proposed N.J.A.C. 7:9A-3.9(a)3, which requires a TWA for an experimental technology used in the design of a system.

N.J.A.C. 7:9A-3.9(a)5 is continued from existing N.J.A.C. 7:9A-3.9(b)5. This paragraph has been reworded to work grammatically with the proposed lead in language of this subsection. This paragraph requires a TWA for any design of a system in which the sanitary sewage from the proposed realty improvement or existing structure will not flow by gravity to the septic tank.

Septic tanks designed in accordance with N.J.A.C. 7:9A-8 are not designed to handle turbulent, raw sanitary sewage flows from a pump station.

Proposed N.J.A.C. 7:9A-3.9(b) requires that a TWA required under N.J.A.C. 7:9A-3.9(a)1 (that is, for a project required to obtain a sewerage facilities certification under N.J.S.A. 58:11-25.1 governing subdivision approval to cover 50 or more realty improvements) follow the procedures in the proposed N.J.A.C. 7:9A-3.18, Requirements for certification of sewerage facilities serving subdivisions involving 50 or more realty improvements. Proposed N.J.A.C. 7:9A-3.18 describes the application requirements and review process for 50 or more certifications as TWAs.

Proposed N.J.A.C. 7:9A-3.9(c) requires that the administrative authority direct an applicant to the Department when it determines that a TWA is necessary (in other words, in one of the situations listed in N.J.A.C. 7:9A-3.9(a)) since a design requiring a TWA may only be approved by the Department.

Proposed N.J.A.C. 7:9A-3.9(d) requires that the administrative authority endorse by signing the TWA application to the Department, endorsing that, other than the aspect(s) of the design for which the TWA is being sought, every other aspect of the design meets the requirements of this chapter and any local requirements. This would include, but not limited to those local requirements adopted as ordinances pursuant to N.J.A.C. 7:9A-3.1. In a TWA application, the Department reviews only those aspects of the design that require a variance from the standards of this chapter. The proposed subsection makes clear that it is the responsibility of the administrative authority to assure that the application meets the standards of this chapter that do not require a TWA before directing the applicant to apply for the TWA from the Department. The application for a TWA requires a signature by the administrative authority assuring that it

has reviewed the project and is aware of what is to be reviewed by the Department through the TWA process. The proposed new subsection will help to assure that all portions of a system design that are not consistent with the standards of this chapter and require variances are reviewed by the Department as part of the TWA process.

Proposed N.J.A.C. 7:9A-3.9(e) sets forth how the TWA application should be prepared and submitted to the Department and provides current references to the Department's contact information and to the Department's rules governing application fees for this approval. The Department will provide further details and answers to frequently asked questions in a technical manual, which will be available through the contact information provided at the Department's website. The provision of a technical manual will assist the public in preparing appropriate applications for TWAs by providing the details about the program and the administrative/technical information required for these submittals. Currently, the Department has a Frequently Asked Questions document available through its website, Frequently Asked Questions and Guidance Regarding the Standards for Individual Subsurface Sewage Disposal Systems N.J.A.C. 7:9A at http://www.state.nj.us/dep/dwq/pdf/faq79a.pdf. The proposed technical manual will provide specific illustrative examples and detailed answers to questions on site-specific concerns.

Proposed N.J.A.C. 7:9A-3.9(f) lists the documentation that must be provided with the application. The proposed subsection codifies current application requirements. Specifically required are the proposed designs, the administrative authority's endorsement and documentation that the designs will provide the level of protection required by the Standards. The specifics of the site, the design and technical data that might be required to prove protection of surface and ground water quality are required on the forms identified and available through the website as

well as will be the technical manual for application and technical review of TWAs. These requirements are limited to those variances that the Department most often receives and are typically granted when the accompanying considerations are provided. However, the technical manual will provide for alternative methods for obtaining approvals and not be limited to specific requirements for specific variance requests.

Proposed N.J.A.C. 7:9A-3.9(g) lists the criteria that the Department considers when reviewing a TWA. This list is illustrative of location, design, construction, installation, alteration, operation and maintenance considerations that the Department evaluates when processing variance requests. This list of considerations cover those concerns that the Department addresses when reviewing TWAs including: protection of public health and safety and the environment, protection of water quality, assurance that the system will be adequately operated, maintained and managed, system design and expected performance, structural stability of the system and any adjacent improvements, and impacts to adjacent properties. The Department's new technical manual will detail the typical information that will address these criteria.

Proposed N.J.A.C. 7:9A-3.9(h) specifies when a TWA will not be issued for a system. The TWA process is only for a variance to or a waiver from one or more of the requirements of this chapter and, therefore, the TWA process cannot grant a variance to or a waiver of the requirements of any ordinance, or any other rule or regulation. The Department will not issue variances for the installation of a system that would violate any other Federal, State, county or local requirement. Examples of other rules that a waiver or variance will not be issued for, include, but are not limited to, State rules governing flood hazard areas (N.J.AC. 7:13, Flood Hazard Area Control Act Rules), or local ordinances adopted pursuant to N.J.A.C. 7:9A-3.1(b),

Ordinances. Since the administrative authority may adopt ordinances that are more stringent than this chapter, the Department will not issue a TWA that will create a variance from or otherwise waive a local ordinance requirement as indicated in proposed N.J.A.C. 7:9A-3.9(h).

A treatment works approval authorizes the administrative authority to issue a final construction approval for nonconforming system designs. Proposed N.J.A.C. 7:9A-3.9(i) states that once the TWA is issued, the administrative authority may issue the final construction approval. The proposed subsection also states that any final approval from the administrative authority must reflect all the conditions and deviations from the chapter permitted in the TWA.

N.J.A.C. 7:9A-3.10:NJPDES permits

The Department is proposing to amend N.J.A.C. 7:9A-3.10(a) to clarify the meaning of the phrase "exempt from NJPDES permit requirements" by correcting the citation to the NJPDES rules to refer to NJPDES provisions related to activities that are exempt from permitting as opposed to the current citation that refers to facilities that have a permit-by-rule.

N.J.A.C. 7:9A-3.10(b) is proposed for amendment to clarify that the phrase “authorized by rule” is intended to refer to authorization obtained pursuant to the NJPDES rules, as implied by the heading of this section. To avoid any possible misinterpretation that the existing language refers to this chapter, the Standards for Individual Subsurface Sewage Disposal Systems, N.J.A.C. 7:9A, the Department is proposing to replace the phrase, “authorized by rule” with the phrase, “deemed to have a NJPDES permit-by-rule pursuant to N.J.A.C. 7:14A-7.5(a)1 and 8.5(b)1.”

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

Proposed amendments at N.J.A.C. 7:9A-3.12 add a reinforcing statement to the existing requirements that holding tanks can only be used for temporary sanitary sewage holding. The

proposed amendments are necessary to reflect changes that are proposed to other parts of the chapter, namely the prohibition of cesspools, privies, outhouses, latrines and pit toilets. In cases where one of these units is discovered and the property cannot support a system, the administrative authority can prescribe the use of a holding tank as a temporary solution until a permanent remedy is implemented.

N.J.A.C. 7:9A-3.12(a) is proposed to be amended to add the term "temporary" when referring to a sanitary sewage holding tank under this chapter. This subsection is additionally proposed for amendment to provide that an existing septic tank or a portable tank can be used as a temporary sanitary sewage holding device under this section as long as it is intact and not leaking. There are circumstances where the repair of an existing system is limited to repairs to the disposal field. In certain circumstances, the septic tank may be used as a temporary holding tank of sanitary sewage while repairs to the disposal field are being made. In such a case, the Department believes that it is appropriate to allow the septic tank to be used a temporary holding tank for the sanitary sewage generated from the structure which can result in cost savings to the property owner.

N.J.A.C. 7:9A-3.12(b) is proposed to be amended to reflect the proposed re-codification of N.J.A.C. 7:9A-3.4(c) as N.J.A.C. 7:9A-3.4(h).

The Department recognizes that, in some cases, a property that has been served by a cesspool, privy, outhouse, latrine or pit toilet is unsuitable for the location of a system in accordance with N.J.A.C. 7:9A-3.16, Other sanitary sewage disposal units. The Department is proposing at N.J.A.C. 7:9A-3.12(c) to allow the administrative authority to approve the use of a permanent holding tank if the Department has issued a TWA for the use of a permanent holding tank in accordance with to N.J.A.C. 7:14A-23.5. This will assure that the property owner may

continue to use the existing structure and current use of the property while assuring that water quality and health of persons and the environment are protected by assuring that antiquated units do not continue to be used and that onsite disposal of sanitary sewage is not occurring on properties that cannot support proper treatment and disposal of the sanitary sewage. This new provision is consistent with the requirements of N.J.A.C. 7:14A-23.5(b) which list the application requirements for a TWA under the NJPDES rules for the installation of a permanent holding tank.

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

N.J.A.C 7:9A-3.14 requires the administrative authority to notify owners of individual subsurface sewage disposal systems of proper operation and maintenance practices such as a description of how a system works, recommended frequency of pumping and what should not be added into a septic system. N.J.A.C. 7:9A-3.14(d) is proposed for amendment to replace the current option for administrative authorities to supply a Department prepared “operation and maintenance manual” with a reference to guidance materials and technical manuals which are currently available from the Department. These materials and manuals will be updated on a regular and necessary basis. The Department does not issue an operation and maintenance manual, but, instead, gives details to proper operation and maintenance procedures in guidance material such as Frequently Asked Questions documents and homeowner and homebuyer manuals, as well as technical manuals. Accordingly, the proposed amendments more accurately reflect the broader range of materials that are available to assist owners of individual subsurface sewage disposal systems.

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

N.J.A.C. 7:9A-3.15 currently specifies the general record-keeping requirements for the administrative authority regarding inspection reports, plans and specifications for repairs and alterations of malfunctioning systems. The Department is proposing to amend N.J.A.C. 7:9A-3.15(a) to expand the list of required information the administrative authority must maintain. The proposed additions include records of all verified non-compliant malfunctioning systems or components as well as system inspections submitted in accordance with proposed N.J.A.C. 7:9A-12.6. Maintenance of this information is important for coordination and data sharing between the administrative authorities, the Department and the USEPA (which reports to Congress to solicit local and municipal funds). This information is also used in determining appropriate regulatory amendments. This data is additionally helpful in determining distribution of funds to municipalities from the Wastewater Infrastructure Trust. The Department assists the administrative authorities with regulation interpretation, development of municipal ordinances, guidance on septic management, technical support for the incorporation or use of technology, courtesy review of engineering designs, and general program coordination regarding septic permitting. The records proposed to be maintained by the administrative authorities will assist the Department in its coordination with and assistance to the administrative authorities.

While N.J.A.C. 7:9A-3.15 currently requires that certain information be maintained by the administrative authority, it does not require that the information be reported to the Department. Proposed N.J.A.C. 7:9A-3.15(d) requires administrative authorities to electronically submit to the Department, by February 1 each year, a report on forms provided by the Department information regarding systems in each of their municipalities. This information includes, the total number of systems known to be present in each municipality; the types of inspections conducted on systems and the number of each type conducted; the types of permits

issued by the administrative authority and the number of each type issued; the number, type and apparent cause of verified non-compliant systems; and description of areas known to have higher than normal rates of non-compliance. Additionally required is a description of areas known to have higher than normal rates of noncompliance. Examples of areas with higher than normal rates of non-compliance which could be problem areas include sites with high water tables or poor soils, residential developments with a high number of non-compliant systems either due to faulty designs or installations, older developments served by cesspools or privies, or areas of well contamination. These metrics are essential for developing and implementing Total Maximum Daily Loads (TMDLs) as required by 303(d) of the Clean Water Act and in establishing critical areas to protect water quality in watersheds. This data and metrics will provide the Department with the information necessary to respond to requests for information required by various Federal and State entities in a timely manner.

N.J.A.C. 7:9A-3.16 Reserved (Proposed: Other sanitary sewage disposal units)

Proposed N.J.A.C. 7:9A-3.16 requires that, when a privy, outhouse, latrine, pit toilet or similar disposal unit, or a cesspool in need of repair or alteration that serves a structure is identified by the administrative authority, the administrative authority must order that it be abandoned and replaced with a system. Privies, outhouses, latrines, and pit toilets, similar to cesspools, allow discharge of black water directly to the subsurface environment with no treatment. This provision does not refer to temporary holding units such as portable toilets used temporarily at construction sites or for short term events as these units do not discharge to the environment.

In the existing rules, repairing malfunctioning cesspools is allowed following a malfunction. However, privies, outhouses, latrines and pit toilets are not specifically addressed

in the existing rules. Such antiquated units were not constructed in a manner that meets minimum current standards. Therefore, the Department is proposing that these antiquated units, upon discovery, and any cesspool that needs repair or alteration be upgraded to a system to assure adequate treatment of sanitary sewage prior to discharge into the ground. The options available to sites that cannot support a conforming system are given in the proposed N.J.A.C. 7:9A-3.16(a)1 and 2. The Department recognizes that, under certain conditions, N.J.A.C. 7:9A-3.16 does not cover all available options for sanitary sewage after a noncompliant condition has been identified, only those that refer to options of subsurface sewage disposal covered by this chapter or the permanent use of a holding tank through the NJPDES program. In cases where options are presented to the administrative authority that are not covered by this chapter or N.J.A.C 7:14A, an applicant might have to rely on other codes as recognized under the Realty Improvement Sewerage and Facilities Act such as applicable plumbing codes, such as in the case of a waterless or composting toilet.

Proposed N.J.A.C.7:9A-3.16(a)1 provides that a system proposed to replace a privy, outhouse, latrine or pit toilet or a any cesspool in need of repair or alteration that cannot completely conform to this chapter must be designed as close to the requirements of this chapter as determined possible by the administrative authority, provided the system as improved results in a discharge that is protective of human health and the environment. If the administrative authority is not satisfied that a site will be able to support the components of a nonconforming system, the owner would then be directed to apply to the Department for a treatment works approval to construct a holding tank under proposed N.J.A.C.7:9A-3.16(a)2.

Proposed N.J.A.C.7:9A-3.16(b) requires that during a real property transfer any cesspool, privy, outhouse, latrine, or pit toilet be abandoned and replaced with a system. The Department

believes that mandatory replacement (with limited exceptions as described below) of these disposal units, which are not considered adequate sanitary sewage utilities, during the transfer of real property is an efficient, reasonable way to eliminate the use of systems that do not comply with the requirements of this chapter. As a result of this proposed provision, with limited exception for certain transfers of properties containing functioning cesspools, the use of such units for onsite wastewater disposal after the transfer of a property will be prohibited. This will assure the public, including the mortgage and lending industry, that there are appropriate, adequate, and conforming sewerage utilities serving the structure on the property. This new provision allows for the identification of these units during a real property transfer, and therefore will alleviate a burden to the administrative authorities to identify all such units in use in their jurisdictions.

While all privies, outhouses, latrines, pit toilets or similar sanitary sewage disposal units, as well as all malfunctioning cesspools, must be abandoned and replaced with a system complying with this chapter, proposed N.J.A.C.7:9A-3.16(c) provides a limited exception that would allow for the continued use of cesspools that are not malfunctioning after certain types of real property transactions. A cesspool that is not malfunctioning may continue to be allowed to be used after certain transactions have occurred. These transactions are limited to those listed, typically, where little money is transferred or transactions transferring limited property rights such as leases and deed corrections. Additionally, transfers made pursuant to an order executed as part of a judicial proceeding are also included in these exemptions. The exemptions listed are from the appropriate sections of N.J.S.A. 46:15-10 which lists exemptions from the realty transfer fee. The use of any privy, outhouse, latrine, pit toilet, or similar unit or a malfunctioning cesspool, shall not be allowed after any transfer of property.

Proposed N.J.A.C. 7:9A-3.16(d) requires documentation of an exemption claimed under (c) be provided on applicable New Jersey Department of Treasury Affidavit of Consideration of Use forms with any required supporting documentation to the administrative authority.

N.J.A.C. 7:9A-3.17:Registration of personnel (Proposed heading: System professionals)

The Department is proposing to change the section heading to more accurately reflect the extent of the standards contained within the section which deals with all septic system professionals and not just those system professionals registered with the Department.

N.J.A.C. 7:9A-3.17 currently provides that the Department will establish a list of individual subsurface sewage disposal system professionals for the purposes of disseminating information to those individuals. Those who register to receive information are required to indicate in which of five categories they seek to be registered; septic system enforcement officer, site evaluator, septic system designer, septic system installer or septic system inspector, each of which is defined in existing N.J.A.C. 7:9A-3.17(b). The Department is proposing to delete existing N.J.A.C. 7:9A-3.17. The definitions of the registration categories are proposed to be defined in N.J.A.C. 7:9A-2.1. Rather than requiring registration to receive information, the Department will provide all information that was available to those registering in the five categories under N.J.A.C. 7:9A-3.17 to the general public through publications and a comprehensive website referenced in proposed N.J.A.C. 7:9A-3.9(e) (existing N.J.A.C. 7:9A-3.9(c)).

Proposed N.J.A.C. 7:9A-3.17(a) requires that, to be classified as authorized, installers must demonstrate, upon request, that they have the knowledge necessary to work with the proprietary technologies used in a design that includes either advanced wastewater pretreatment devices, products used in lieu of laterals and/or filter material, and/or drip dispersal. The

installers must provide, upon request, to the Department or the administrative authority written evidence from the manufacturer or system integrator whose products they are working with that they are sufficiently knowledgeable about the technology they are installing. Without sufficient understanding of the product and/or manufacturer's specifications, individuals who wish to install systems that incorporate the technology or product may not be able to do so in a manner satisfactory to the manufacturer, the Department or the administrative authority.

To further provide for the credentialing of system professionals, the Department has proposed to expand the requirement for professional credentials for authorized installers effective January 1, 2012. By this date all authorized installers must, in addition to the written evidence from the manufacturer or system integrator whose products they are working with, also possess a valid Certified Installer of Onsite Wastewater Treatment Systems (CIOWTS) Advanced Level certification from the National Environmental Health Association (NEHA). This certification has already been obtained by some installers in New Jersey and is readily available online as NEHA maintains training materials on its website at: http://www.neha.org/onsite/index.html and testing for the certification is done via the Internet.

Proposed N.J.A.C. 7:9A-3.17(b) requires that authorized service providers provide, upon request, to the Department or administrative authority evidence that they have the knowledge necessary to service advanced wastewater pretreatment devices or drip dispersal technologies. The satisfactory evidence includes either written evidence from the manufacturer or system integrator whose products they are servicing that they are sufficiently knowledgeable about the technology or possession of a S2 or higher public wastewater treatment operator license issued by the Department. Accordingly, while an installer may only be considered an authorized installer if he or she is certified by the manufacturer of the equipment to be qualified to work

with the technology, a service provider may become authorized either by obtaining manufacturer certification or, for advanced wastewater pretreatment units or drip dispersal systems, by obtaining licensure pursuant to the Licensing of Water Supply and Wastewater Treatment System Operators Rules, N.J.A.C. 7:10A. This provision will assure that only qualified individuals are involved in the maintenance of these systems and that there will be qualified individuals available to maintain existing systems, even if the manufacturer of a system ceases to do business in the State.

Proposed N.J.A.C. 7:9A-3.17(c) requires that those authorized service providers who are using the S2 or higher license credential for working with advanced technology and that are not certified by the manufacturer and/or a system integrator of the products they are servicing follow and meet all of the applicable requirements of this chapter as well as all of the applicable requirements of N.J.A.C. 7:10A. This assures that the quality of the operator license issued by the Department pursuant to N.J.A.C. 7:10A is maintained as a standard of quality for use in servicing onsite wastewater treatment technologies.

N.J.A.C. 7:9A-3.18:Additional requirements for certification of sewerage facilities serving subdivisions involving more than 10 realty improvements (Proposed heading: Requirements for certification of sewerage facilities serving subdivisions involving more than 50 realty improvements

N.J.S.A. 58:11-25 provides that no building permit may be issued until the Board of Health having jurisdiction certifies that the proposed water supply system and sewage facilities are in compliance with the requirements of the Realty Improvement Sewerage and Facilities Act (1954) (RISF Act), N.J.S.A. 58:11-23 et seq., and State and local standards. Where subdivisions consisting of 50 or more realty improvements are involved, N.J.S.A. 58:11-25.1 prohibits

approval of any subdivision until the Department has certified that the proposed water supply and sewerage facilities comply with applicable State standards. For the sewerage facilities, the Department uses N.J.S.A. 58:10A-1 et seq. and N.J.A.C. 7:9C, which apply to wastewater discharges from facilities designed to protect ground water quality. Certifications for water supply at subdivisions consisting of 50 or more realty improvements are issued pursuant to N.J.A.C. 7:10-12.42.

Existing N.J.A.C. 7:9A-3.18 specifies requirements applicable to applications for certification both by the administrative authority and the Department. Requirements vary depending upon the size of the development, with basic information specified for all development, additional information for development involving more than 10 realty improvements, and yet further information required for subdivisions of 50 or more realty improvements that must be certified by the Department The Department is proposing to amend this section to specify the requirements applicable to subdivisions of 50 or more realty improvements which require Department certification pursuant to the RISF Act. To reflect this change in the focus of the section, the Department is proposing to amend the section heading to be the "Requirements for certification of sewerage facilities serving subdivisions involving more than 50 realty improvements". Developments involving subdivisions with less than 50 realty improvements are reviewed and approved through local jurisdiction and therefore not subject to this section.

To improve the process of reviewing these applications, the proposed amendments to N.J.A.C. 7:9A-3.18 itemize the application requirements for obtaining Department certification, which is now going to be processed as a Treatment Works Approval (TWA). Currently, the requirements for application and technical review of 50 or more sewerage facilities ("50 or

more") certification are provided in a technical manual. The Department is proposing to codify the existing procedure. The proposed modifications to N.J.A.C. 7:9A-3.18 include stipulation of when the certification is needed and clarification that applications for certification must adhere to the requirements in this chapter. The proposed requirements include the administrative and technical information to be submitted.

Authorities that issue subdivision approvals are required by RISF Act not to approve subdivisions for 50 or more realty improvements until the Department issues certification that the water supply and sewerage facilities comply with State standards. These certifications are referred to as "50 or more" certifications. It is the responsibility of those agencies, such as municipal planning or zoning boards, to direct applicants to apply for the certification. The Department has developed technical guidance for obtaining the certification. This certification process is not a final construction approval, and therefore the administrative authority must review each proposed system for conformance with this chapter prior to the commencement of any construction as specified in proposed N.J.A.C. 7:9A-3.18(d).

The Department is proposing to incorporate this certification process into the existing treatment works approval process in proposed N.J.A.C. 7:9A-3.9(a) to enhance the structure of the existing certification program and to streamline the process. The unit that currently manages these certifications also processes certain applications under the treatment works approval program.

The Department is proposing to amend N.J.A.C. 7:9A-3.18 to explain the application requirements for the 50 or more process. The Department is proposing to delete N.J.A.C. 7:9A-3.18(a) which provides requirements applicable to all applications for certification, regardless of the number of realty improvements, and replace it. Proposed N.J.A.C. 7:9A-3.18(a) provides

that when a certification is required from the Department pursuant to N.J.S.A. 58:11-25.1 (when the subdivision consists of 50 or more realty improvements, including when the subdivision extends into more than one municipality and will, in aggregate, cover 50 or more realty improvements), the application to the Department will be processed as an application for a TWA (see N.J.A.C. 7:9A-3.9) and reviewed for compliance with the Ground Water Quality Standards (N.J.A.C. 7:9C) and the Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.).

The existing text in N.J.A.C. 7:9A-3.18(b) refers to the two certifications that realty improvements that are part of a development containing more than 50 are required to obtain: the 50 or more water quality certification (which is proposed to be reviewed through the TWA process) and a design and construction certification by the administrative authority. The procedure for review of the design of the development of 50 or more realty improvements has not changed under the proposed rule, but is described with proposed amendments to this section.

Existing N.J.A.C. 7:9A-3.18(b) describes the requirement from the Realty Improvement Sewerage and Facilities Act (1954), at N.J.S.A. 58:11-25.1, that subdivisions of 50 or more realty improvements receive water quality certification from the Department and final design and construction approval from the administrative authority. This is retained in the proposed amendments to N.J.A.C. 7:9A-3.18(a) that describe when a TWA is required for a proposed development, that the certification is processed as a TWA and the requirements that the local municipality refer the applicant to the Department for the certification review and in the proposed amendments to N.J.A.C. 7:9A-3.18(d) that requires final design and construction approval from the administrative authority. N.J.A.C.7:9A-3.18 (b) is proposed to be deleted and replaced with application requirements for the TWA for 50 or more realty improvements certification.

The proposed required components of the TWA application are currently contained in the Department's Guidance for 50 or More Realty Improvement Certification. The required information includes the completed application form, engineering plans for the proposed development, a copy of the preliminary subdivision approval from the municipality or other documentation demonstrating that the proposed development complies with local requirements, proof of compliance with the Pinelands Comprehensive Management Plan (CMP) or certification that the project is not subject to the CMP, a certification that the application contains accurate data and information, proof of notification to the appropriate local authorities such as the planning board, environmental commission, town clerk and administrative authority that application has been made for 50 or more certification, and the results of a nitrate dilution model projecting the loading of nitrate from the proposed development. Analysis utilizing an appropriate nitrate dilution model assures that the lot sizes are appropriate to allow dilution of the wastewater to the level specified in the Ground Water Quality Standards (GWQS). The Department is updating the nitrate dilution model mass loading target in the Technical Manual to be consistent with the amended GWQS at N.J.A.C. 7:9C-1.8(b)4, six mg/l versus the existing 5.4 mg/l.

The requirement of preliminary subdivision approval within the 50 or more TWA application process assures that the Department is reviewing the same information as the local municipality, zoning and planning boards, and administrative authority and that the Department will not certify a project that will need to be modified to meet local requirements after the TWA for 50 or more realty improvement certification is issued by the Department. Also, the nitrate dilution modeling for the proposed development will be based upon the lot sizes preliminarily approved by the town planning board. In this way an applicant cannot come to the Department

first and determine minimum lot size based on nitrate dilution modeling, get approval from the Department and then go back to the town and request a variance to their zoning.

N.J.A.C. 7:9A-3.18(c) currently requires that applications for certifications for subdivisions of more than 10 realty improvements provide specific information in addition to that required by N.J.A.C. 7:9A-3.5(c). The Department is proposing to amend this subsection to remove reference to subdivisions of more than 10 realty improvements and replace this reference with a reference to subdivisions of more than 50 improvements to reflect the proposed amendments discussed above limiting the applicability of this section to subdivisions of 50 or more realty improvements. The additional information currently required to be part of general site plans submitted for certification of subdivisions of more than 10 realty improvements in N.J.A.C. 7:9A-3.18(c)1through 11 is not changing. The proposed amendment states that these requirements are in addition to the requirements in N.J.A.C. 7:9A-3.5(b), the general permit application requirements for all system applications.

The Department is proposing to delete existing N.J.A.C. 7:9A-3.18(d), which prohibits a local subdivision approval until a 50 or more certification has been issued by the Department for subdivisions with more than 50 realty improvements or an aggregate of 50 or more realty improvements over more than one municipality as this prohibition is proposed to be relocated to proposed N.J.A.C. 7:9A-3.18(a). The Department is proposing a new N.J.A.C. 7:9A-3.18(d) which provides that, after the Department certifies, through a TWA, that a proposed development will not contravene water quality standards and the lots are appropriately sized to dilute the wastewater, the administrative authority must then review and approve the construction of each proposed individual subsurface sewage disposal system in accordance with N.J.A.C. 7:9A-3.2 prior to the construction of the realty improvements or systems. As N.J.A.C. 7:9A-3.2 provides

that all new systems must be in conformance with the requirements of this rule, proposed new systems within a proposed subdivision which has obtained a water quality certification from the Department still must be reviewed for compliance with the requirements specified throughout the rest of this chapter.

The established treatment works approval program (N.J.A.C. 7:14A-22.26) incorporates a fee calculation that will provide reasonable fees to sustain the 50 or more realty improvement certification program. Proposed N.J.A.C. 7:9A-3.18(i) provides the address for request and filing of a TWA application for a 50 or more realty improvement certification. It also states that the application fees will be calculated based on the formulas specified in N.J.A.C. 7:14A-22.26 using the estimated costs of the proposed individual subsurface sewage disposal systems. Since the 50 or more certification process was never codified as a permit review process, it never had application or review fees associated with it nor did it have a review time clock. Some applications could be in review for up to a year with no administrative deadlines. By reviewing the certification application as a TWA, the Department can associate appropriate fees with the review as well as assure timely review and processing of the application. The TWA application fees are calculated based on the estimated construction costs associated with the engineering and construction of the individual systems proposed in the proposed subdivision and no other aspect of the development thereby keeping application costs down for the applicant as well as assuring timely review of the application within the TWA administrative review time clock established at N.J.S.A.13:1D-29 et seq.

N.J.A.C. 7:9A-3.20:Hearing procedures

Proposed N.J.A.C. 7:9A-3.20 specifies the procedures for requesting a hearing, as described in the RISF statute at N.J.S.A.58:11-31. The rule is proposed for repeal and

replacement with a new section that differs from the current rule in that it specifically directs aggrieved applicants to the applicable board of health, as does the statute, rather than generically to the "administrative authority" and specifies that the 15-day time frames for a hearing to be held and a decision rendered are 15 business days. Additionally, it is proposed that reference be added to this section to the right of appeal of the decision of the board of health to a court of competent jurisdiction.

Subchapter 4. Site Evaluation and System Location

Subchapter 4 is proposed to be readopted with amendments to certain sections as discussed below. This subchapter specifies the requirements for locating a system on a property given the inherent natural characteristics of the site, such as slope and drainage, as well as consideration for built structures and components of the site, such as other septic systems or components and occupied buildings.

N.J.A.C. 7:9A- 4.1:General provisions for site evaluation and system location

The Department is proposing to amend N.J.A.C. 7:9A-4.1(b) to change the existing cross-reference to N.J.A.C. 7:9A-3.5(c)2 to reflect the proposed recodification of this paragraph to N.J.A.C. 7:9A-3.5(c)3.

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

The Department is proposing to amend N.J.A.C. 7:9A-4.3 to clarify that all separation distances required by this section must be maintained and no waiver or permit issued by another entity may reduce the distances required by this chapter. The proposed amendments also make clear that these separation distances are not only required to be satisfied at the time of the construction of a system, but must be maintained at all times to ensure public health and safety as well as preserving the site so that an existing system can be properly operated, maintained and

function as originally designed. Maintenance of these separation distances for future improvements or modification on the property is also necessary to protect human health and the environment from a malfunctioning system. For example, installation of a new footing drain too close to a disposal field could result in inadequately treated sanitary sewage entering into the drain and being discharged to the ground surface.

The introductory paragraph of N.J.A.C. 7:9A-4.3 is also proposed to be amended to change the existing reference to the Safe Drinking Water Act Regulations, codified at N.J.A.C. 7:10, to the Well Construction and Maintenance; Sealing of Abandoned Wells rules, codified at N.J.A.C. 7:9D which include the minimum distance requirements of wells and septic system components. While the Safe Drinking Water Act Regulations contain minimum distance requirements for wells, these requirements were amended to reference the specific requirements in the Well Construction and Maintenance; Sealing of Abandoned Wells rules.

In Table 4.3, the Department is proposing to amend the separation distance required from a building sewer to a water service line from five feet to one foot to be consistent with the Uniform Construction Code, N.J.A.C. 5:23, which has been revised since the five-foot separation distance was established in this rule. This proposed amendment also clarifies the relationship between Table 4.3 and N.J.A.C. 7:9A-7.7 which requires consistency with N.J.A.C. 5:23.

The Department is proposing amendments to the footnotes to Table 4.3 to revise the requirements for separation distances to make them consistent with other standards, including the 2003 National Plumbing Code, Table 16.4.3, and to address inconsistencies within the existing rule.

The Department is proposing to delete the existing Table 4.3 footnote (1) which states that subsurface drains are considered watercourses as this clarification is proposed to be included

in the definition of "water course" at N.J.A.C. 7:9A-2.1. Proposed footnote (1) will allow the administrative authority and Federal and State agencies having jurisdiction to determine the most appropriate separation distance based on other jurisdictional separation or minimum separation distance requirements. This would allow the agency to increase the required minimum separation distance between a system component and a water course if their regulatory authority, such as a law, rule or ordinance, provides for a setback greater than that provided in this rule.

The Department is proposing to amend footnote (4) to update the reference to the well construction rules at N.J.A.C. 7:9D which now explicitly delineate the minimum well distance requirements. Also, to be consistent with proposed amendments to the term sewage throughout the proposal the term "sewage disposal" is proposed to be changed to "sanitary sewage disposal."

The Department is proposing to add a new footnote (14) to Table 4.3, referenced in the D-Box component. The proposed new footnote identifies other components of the effluent delivery system, such as piping from a septic tank to a distribution box, that are considered to be part of the distribution box (D-Box) for purposes of calculation of the required separation distance. The Department has always considered these components to be part of the D-box and is proposing the clarification to remove any potential misunderstanding as to how the required separation distances are established.

The Department is additionally proposing a new footnote (15) to Table 4.3, referenced in the Property Line column heading. The proposed footnote specifies the documentation an administrative authority would need to have on file before allowing the reduction of the required distance between system components and the property line to zero feet under certain circumstances. Currently, a waiver may be obtained from the Department’s treatment works approval program for reduction of the property line separation distance. Rather than continue to

issue this waiver at the State level, the proposed amendment would allow the administrative authority to approve a reduction in certain circumstances. Particularly, it is proposed that the installation of a system within the property line separation distance required in Table 4.3 could be allowed by the administrative authority only after the affected property owner agrees to document the details of the separation distance affected and the potential for future limitations on the affected property(s). The forms of documentation that are acceptable include a written statement indicating that no subsurface utilities will be installed in the future in the affected area or a deed notice placed in the deed of the affected property(ies) that acknowledges the separation distance reduction and the resulting limitations on future improvements of the affected property. A deed notice should include details of the location of the system that infringes on the separation distance and what types of improvements cannot be installed within a given distance of that system component. Any reduction to the required separation distance must be properly documented in either of these ways prior to the property owner's obtaining a construction approval. This proposed amendment would only be applicable to property line separation distance requirements, it would not apply to any other minimum separation distance requirement in this section.

N.J.A.C. 7:9A-4.4: Slope

The Department is proposing to amend N.J.A.C. 7:9A-4.4(a) to clarify how the slope requirements of the existing rule should be interpreted. Specifically, the proposed amendments reinforce that no system may be constructed where the slope of the existing ground surface is greater than 25 percent. This prohibition is protective of the system structural integrity and assures the proper hydraulic functioning of systems. Constructing a septic system on slopes that exceed 25 percent would create uncertainties with respect to hydraulics, slope stability, erosion,

run-on and run-off, and possibly artesian conditions. The *USEPA Onsite Wastewater Treatment Systems Manual* (2002) recommendation for typical system applications for the construction of septic systems is that these systems should be placed only in areas where the slope is less than or equal to 20 percent and to avoid systems located where the slope is 30 percent and greater. The Highlands Act at N.J.S.A. 13:20-32(j) similarly restricts development in areas with slopes greater than 20 percent. The Department opted to use the 25 percent slope standard based upon being the midpoint between the typical application and the point at which applications should be avoided as well as being consistent with the existing requirement in the rule for maximum slope. The amended subsection will apply to sites throughout the State; however other regulatory authorities, such as Highlands, that have a more stringent requirement for applications within their jurisdiction will be able to be more restrictive than these minimum standards through their regulatory process. The proposed amendment clarifies that the maximum slope requirement is determined with reference to the existing ground surface. If a property owner with a property that has an existing slope greater than 25 percent wishes to install an onsite system, they must apply for a TWA. There may be specific sites on the property that may be suitable with advanced engineering and site evaluation for an onsite system. However, because of the engineering analysis needed to determine whether a system will function properly under those conditions, such proposed systems must be reviewed on a case by case basis by the Department under the TWA process.

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

Proposed N.J.A.C. 7:9A-4.5(c) prohibits any increase in runoff or ponding on adjacent properties by requiring that septic system designers design a system and assure that activities related to installation and subsequent operation of the system will not impact adjacent property

owners with additional surface drainage onto those properties. If an administrative authority reviews a system design that it believes will impact adjacent properties, septic system designers will have to demonstrate that there will be no net increase in stormwater runoff onto or ponding on those properties during and after construction activities. The Department is aware that system construction activities and changes in final grade after system construction may negatively impact neighboring properties by redirecting stormwater runoff. This runoff may cause erosion, flooding or even malfunction of the neighbor's system. The proposed new subsection is intended to prevent these potential negative secondary impacts. The proposed subsection would allow the affected property owners to consent specifically in writing to a temporary increase in surface drainage during the construction of the system. Such an agreement would only be appropriate where there is no other Federal, State or local runoff restriction applicable. For example, if there was an FW1 waterbody on the adjacent property and the increased runoff would impact the amount of runoff reaching the waterbody, even a temporary increase in runoff would be prohibited and would continue to be prohibited regardless of the willingness of the affected property owner to sign an agreement.

N.J.A.C. 7:9A-4.6: Surface flooding

Existing N.J.A.C. 7:9A-4.6 prohibits the construction of a subsurface sewage disposal system in an area subject to flooding. Areas subject to flooding include those where flooding has been observed or records exist evidencing past flooding, as well as areas on Soil Conservation Service County Soil Survey Report mapping identified as containing the presence of specific soil types, and areas known by the administrative authority to have flooded.. The purpose of this section is two fold: to assure that sanitary sewage will be appropriately treated prior to disposal to ground water and that it will not be discharged to surface waters. Discharge of improperly

treated sanitary sewage to surface water is dangerous to human health and the environment. The rules provide the proper construction standards for onsite subsurface disposal systems serving structures in New Jersey. Since discharge to a subsurface sewage disposal system at a time when that system is surrounded by flood water results in the equivalent of the discharge of untreated effluent to the surface waters of the State, systems are prohibited from being constructed in areas prone to flooding.

Existing N.J.A.C. 7:9A-4.6(c) provides that, when fill material is proposed in areas subject to flooding to elevate the ground surface above the level of flooding, restrictions detailed in N.J.A.C. 7:9A-4.6(d) and N.J.A.C. 7:9A-10.3(b) are applicable. The Department is proposing to delete this subsection for the following reasons.

When an area is subject to surface flooding, the depth to the seasonal high water table at the time of the flooding is above the natural ground surface. It would be a detriment to human health and the environment to allow for the discharge of wastewater in an area where there is an insufficient zone of treatment during flooding events. Allowing such a discharge would result in partially treated wastewater coming into contact with flood waters. It is therefore unreasonable to allow for the location of a system in areas subject to flooding since untreated wastewater would be discharged to natural waters. The proposed deletion of N.J.A.C. 7:9A-4.6(c) eliminates the potential for filling of these areas for the purpose of installing a septic system and therefore eliminates the possibility of inadequately treated wastewater being discharged to surface or ground waters of the State. As is the case for all existing systems, a system that exists in an area prone to flooding constructed prior to the adoption of this rule amendment would continue to be used unless there is a malfunction or is to be altered. In these cases, a system in an area prone to flooding would have to follow the requirements of N.J.A.C. 7:9A-3.3.

Existing N.J.A.C. 7:9A-4.6(d) is proposed to be recodified as N.J.A.C. 7:9A-4.6(c), and is being amended and updated in accordance with the Flood Hazard Control Act Rules, N.J.A.C. 7:13. N.J.A.C. 7:13 no longer refers to delineated streams or encroachment lines. Therefore, those terms are being deleted from this subsection. Because permits issued pursuant to N.J.A.C. 7:13 are no longer referred to as "stream encroachment permits," but are now called "flood hazard area permits," the reference to a "stream encroachment permit" is being removed and replaced accordingly. In addition, references to "delineated stream" are proposed to be replaced with the terms "regulated area," and "regulated water" to be consistent with the definitions at N.J.A.C. 7:13-2.3 and 2.2, respectively.

N.J.A.C. 7:9A-4.7:Freshwater wetlands

The Department is proposing to amend N.J.A.C. 7:9A-4.7(c)1 and 2 to assure that documents used as evidence for compliance with the Freshwater Wetlands Protection Act Rules are recognized by the Department’s wetland and land use program as current and valid. To accomplish this in N.J.A.C. 7:9A-4.7(c)1 and 2, the word “valid” is being inserted into both of these provisions. This will assure that any permits issued under this rule will result in systems being constructed in areas authorized under the Freshwater Wetlands rules.

N.J.A.C. 7:9A-4.8 Area reserved for sewage disposal (Proposed heading: Area reserved for sanitary sewage disposal)

The Department is proposing to clarify that the term sewage throughout the rules refers to sanitary sewage. Therefore, the Department is proposing to update the section heading by adding the term sanitary.

Subchapter 5. Determination of Soil Suitability

Subchapter 5 contains the requirements for determining soil suitability on a site. The subchapter is proposed to be readopted with amendments designed to clarify the process for determination of soil suitability and the details of how to conduct one of the soil suitability tests, as described below.

N.J.A.C. 7:9A-5.4: Criteria for determination of soil suitability classes

As discussed above concerning N.J.A.C. 7:9A-2.1, the Department is proposing to delete the definition of "pre-existing natural ground surface" and modify the term "existing ground surface" to eliminate confusion between the terms, which are used throughout the current rules. As used in the rules as proposed for amendment, the existing ground surface is the level of the ground prior to any alteration or grading. At N.J.A.C. 7:9A-5.4, the Department is proposing to change terminology consistent with the similar proposed amenments throughout the rules. The Department is proposing a similar amendment to footnote (1) to Table 5.4, Soil Suitability Classification.

N.J.A.C. 7:9A-5.6: Excessively coarse horizons and substrata

The Department is proposing to amend N.J.A.C. 7:9A-5.6 in several ways. The Department is correcting a typographical error in the spelling of "coarse" at N.J.A.C. 7:9A-5.6(a)1. N.J.A.C. 7:9A-5.6(a)2 and 3 are proposed for amendment to update the characteristics and testing specifications for excessively coarse soil horizons or substrata to be consistent with the proposed amendments in the fill specifications found at the proposed N.J.A.C. 7:9A-10.1(f)4 and 5. The proposed amendments at N.J.A.C. 7:9A-10.1(f)4 and 5 expand the range of material that is permissible for fill by grain size. The Department is proposing to amend N.J.A.C. 7:9A-5.6 to include similar language as proposed at N.J.A.C. 7:9A-10.1(f)4. The amendments allow for the use of fill with a coarse fragment content of less than 15 percent by volume or less than

20 percent by weight. For further discussion on the basis for the proposed amendments to the coarse fill standard, see the summary for N.J.A.C. 7:9A-10.1(f)4, below. The proposed amendments at N.J.A.C. 7:9A-5.6(a)2 allow native soil to remain, if it falls within the new specifications established for fill, and therefore, has essentially the same permeability as fill conforming with N.J.A.C. 7:9A-10.1. This will reduce costs associated with excavation and soil replacement with fill while assuring that the permeability necessary to proper treatment and disposal continues to be present.

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

The Department is proposing to amend N.J.A.C. 7:9A-5.9(b) to specify how water level readings are to be conducted when performing a hydraulic head test via piezometers. The proposed amendment to this subsection emphasizes the role of the administrative authority in approving the number of readings to be conducted based on the site conditions. The amendment also makes clear the administrative authority's authority to require additional water level readings if there is variability in data or other discrepancies in the way the tests were conducted or in the data received. Even though this is already done by many administrative authorities, the proposed amendment serves to reinforce in code their authority to require this additional testing to develop necessary information to assure that systems are properly located and designed for a specific location.

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

As described above at N.J.A.C. 7:9A-2.1, the Department is proposing to delete the definition of “pre-existing natural ground surface” and modify the term “existing ground surface” to eliminate confusion between the terms. At N.J.A.C. 7:9A-5.10, the Department is proposing amendments to the existing rule to reflect this change in terminology consistent with

the amendments proposed throughout the rules. Further, by modifying the reference to "existing ground surface" to "ground surface in the final reference to the term at N.J.A.C. 7:9A-5.10(e), the Department has preserved the ability to properly evaluate the conditions present; either those present at the time of the evaluation or the "existing ground surface" which now refers to the site prior to any regrading or other human influence.

Subchapter 6. Permeability Testing

The Subchapter 6 contains the requirements for testing the permeability of the soils on a site to be used for an individual subsurface sewage disposal system. The amendments proposed to this subchapter clarify the ability of the administrative authority to require additional tests of soil permeability, specify further details on the type of testing that may be required, and refine the existing requirements for testing permeability of fill material.

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

N.J.A.C. 7:9A-6.1 specifies general permeability testing requirements to determine the minimum required area of the disposal field.

The Department is proposing to reword and reorganize N.J.A.C. 7:9A-6.1(a) to read more clearly. This subsection specifies where and how tests of permeability are to be conducted. The requirement of sizing a disposal field on permeability is not changing. The Department is proposing to add the term "proposed" when referring to the testing of potential locations for disposal fields to clarify that a soil suitability determination is done for proposed, not existing, disposal fields. The Department is proposing to remove requirements currently part of N.J.A.C.7:9A- 6.1(a) and relocate these requirements with amendments to N.J.A.C. 7:9A-6.1(a)1and 2. Proposed N.J.A.C. 7:9A-6.1(a)1 reiterates the depth and soil horizon requirements currently part of this subsection for conventional disposal fields. Proposed N.J.A.C. 7:9A-

6.1(a)2 specifies that the design permeability of a proposed mounded or soil replacement disposal field shall be determined based upon the least permeable native soil material above the proposed zone of disposal when any native soil is to remain above the identified zone of disposal. If all of the material above the identified zone of disposal is removed and replaced with fill material meeting the specifications of proposed N.J.A.C. 7:9A-10.1(f) the standard applied for the permeability of the fill material shall be as proposed at N.J.A.C. 7:9A-6.1(a)3, since this material would be limiting factor regarding the disposal of the wastewater.

The Department is proposing new requirements at N.J.A.C. 7:9A-6.1(a)3 and 4 to describe what design permeability is acceptable in disposal fields with soil replacement: requiring that a permeability of six to 20 inches per hour be used for design purposes. Since the amendments proposed at N.J.A.C. 7:9A-10.1(f)4 revise the specification for fill material that no longer relies on a maximum permeability factor, it is necessary to establish a design permeability to use for fill material systems that is not excessively coarse, so that septic system designers have a criteria on which to base the septic system design. Further, since the new fill material specification does not restrict the maximum permeability of the fill material, there is also no need to specify an upper limit of permeability in N.J.A.C. 7:9A-6.1(a)4. Proposed N.J.A.C. 7:9A-6.1(a)4 requires that permeability be determined after installation using a percolation test or a tube permeameter test on fill samples compacted to a bulk density that is equivalent to that in the installed system. These proposed new paragraphs eliminate the ability of a septic system designer to use the permeability class rating method to test select fill and use the results to size the disposal field. The permeability class rating method (or “K” class) is an estimate of soil permeability and is less appropriate in these applications than direct measurement methods such as the tube permeameter tests or percolation tests. Proposed N.J.A.C. 7:9A-6.1(a)4 also requires

that, if different select fill is used for the zone of treatment and the zone of disposal, a separate test be done on both materials.f treatment, zone of treatment as welle zone of disposal and not select fill sinc

Since soils can vary substantially, the Department is amending N.J.A.C. 7:9A-6.1(b) to reinforce the administrative authority's ability to require additional permeability testing whether it be more testing or an alternative type of testing whenever the administrative authority determines it is necessary due to uncertainty regarding the presence of a limiting zone or the soil types in the area. This proposed amendment to the existing language assures that the administrative authority can require more information, whether data from a different depth or at a different location within the proposed location of the disposal field, to assure that the system is being designed based upon the most limiting permeability within the proposed disposal field. The administrative authority has always had the ability to require additional tests; the Department is proposing this amendment to clarify that it may also require different types of tests, or that the additional tests be taken at a different location if doubt exists regarding the results of the initial tests.

N.J.A.C. 7:9A-6.1(k) is proposed for amendment to expand the role of the New Jersey professional engineer involved in soil testing procedures. Under the existing subsection, all soil testing that is part of the design of an individual subsurface sewage disposal system must be either performed by or under the direct supervision of a New Jersey licensed professional engineer. Under the proposed amendments, in addition to either performing or supervising the performance of soil testing, the septic system designer (which is the new term describing a New Jersey licensed professional engineer who prepares engineering plans and specifications for the

construction or alteration of individual subsurface sewage disposal systems) must certify the results of permeability testing conducted in accordance with this section.

Proposed new N.J.A.C. 7:9A-6.1(l) requires that if a permeability test yields inadequate permeability in the area tested, then that area and an area 15 feet around it shall be precluded as an area for sanitary sewage disposal. The proposed subsection allows for the area's use only if three additional tests in the area demonstrate acceptable permeability. This is consistent with the current methodology in the existing rule associated with percolation testing (a specific type of permeability testing) at N.J.A.C. 7:9A-6.1(e)4.

N.J.A.C. 7:9A-6.6 Piezometer tests

N.J.A.C. 7:9A-6.6 describes standards and procedures applicable to piezometer testing. The Department is proposing to amend N.J.A.C. 7:9A-6.6(b)1 to change "existing ground water" to "ground water" to be consistent with the proposed amendments throughout the rules. The Department has proposed to remove the use of "pre-existing natural ground surface" throughout the rules and to replace it with "existing ground surface" when referring to the ground level prior to any man made modification or disturbance. The proposed amendments includes definitions to more clearly describe what is intended when the surface of the ground is referred to in various parts of the rules. In this requirement for piezometer testing, it is important to identify that the test hole be excavated from the surface regardless of whether or not the surface was at some point re-graded or the present ground surface was never disturbed.

Subchapter 7. General Design and Construction Requirements

Subchapter 7 specifies standards for design and construction of individual subsurface sewage disposal systems including details on the type of wastes and volume based on usage and size of the structure served. The proposed amendments to this subchapter include a new method

for calculating volume of sanitary sewage based on the activities occurring at non-residential structures.

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

Proposed N.J.A.C. 7:9A-7.1(d) requires that septic system designers account for access for service and maintenance to all system components in their system designs This requirement will assure that septic system designers demonstrate that the design will accommodate typical ground equipment access (such as excavators, pump trucks, dump trucks, and backhoes) to the location of all system components and not require specialized access equipment (such as specialized lifts, boats, and helicopters) or removal of permanent site features to service the system. This proposed requirement does not impose a responsibility on the septic system designer for actions by the property owner after the system is constructed; however, in consultation and review of the design plans, designers should make their clients aware of the need for access to system components. The Department has been aware of septic system designs on very constrained sites where a system that meets the requirements of this chapter is possible, but there is no reasonable access for maintenance or replacement of parts. The Department is proposing this new subsection to assure that owners of the system will be able to repair or replace the system or components thereof without concern for damage to or the need to remove features of the property.

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

N.J.A.C. 7:9A-7.3(e) is proposed to specify types of wastes that the Department has determined as inappropriate for regulation under this chapter. Due to the high strength of wastes that include significant quantities of blood, flesh, bones and/or internal organs, these wastes have exceedingly high levels of suspended solids and biochemical oxygen demand. To assure that

systems handling these types of wastes provide an adequate level of treatment and that appropriate maintenance is carried out to assure that the systems continue to operate as designed during use, an increased level of review and monitoring is necessary. Therefore, the Department has determined that these facilities are more appropriately regulated under the NJPDES permit program, regardless of the volume of the discharge.

The USEPA under its Class V Underground Injection Control Study Volume 6 (EPA/816-R-99-014f) outlines a number of challenges associated with these types of discharges throughout the country. Included in the report is an analysis of the strength of the wastewater generated and the design considerations that are necessary for those types of systems. The report also indicates that, even though maintenance of these systems is relatively straightforward, many of the operators of these smaller systems often ignore system maintenance or maintain the systems improperly. Due to these and other recommendations in the report, the Department will require NJPDES permits for those activities. Other alternatives for activities generating wastewaters with significant quantities of blood and related solids supported by the report and the Department include permitted direct discharges to a sanitary sewer system and discharge to a holding tank that is properly emptied and hauled to a publicly-owned treatment works.

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

N.J.A.C. 7:9A-7.4 is proposed to be amended to improve implementation of the rule by improving the accuracy of the calculation of design volume. The proposed amendments to this section are intended to improve the method of determining design volume of sanitary sewage from residential and non-residential sources by changing the basis for the calculation from the "type of establishment" to the "type of activity" occurring at a facility. The accurate

determination of design volume is essential to assuring that a system is adequately designed and that the appropriate permit is issued for its design, construction and operation.

The determination of the design volume based on type of establishment has caused many inconsistencies across the State with final design volume numbers in some cases depending on who is categorizing the facility as a "type of establishment". The interpretation involved in categorizing a facility has been a source of debate between the regulated community and regulators. The Department has also become aware of misapplication of the terms listed in the current table at N.J.A.C. 7:9A-7.4(d) resulting in lower estimated design volumes than what should be applicable for a particular facility, especially with regard to establishments that have multiple uses and where a use at an establishment does not precisely fit a category listed in the table at N.J.A.C. 7:9A-7.4(d). This can result in an inadequately sized system being designed for the facility and, ultimately, system failure.

Instead of attempting to shoehorn facilities into a particular single type of establishment to calculate design volume, determining the total design volume requires thoroughly reviewing all activities at a facility that will generate sanitary sewage and accurately determining the maximum anticipated volume of sanitary sewage to the system based on maximum use. Determination of maximum volume of sanitary sewage based upon maximum use is necessary since individual subsurface sewage disposal systems are not designed with capacity to moderate flows or treat and discharge anything greater than the system's maximum capacity. For instance, the increase in the number of convenience stores that now also offer fueling and more intensive food preparation services has led to a dramatic increase in malfunctioning onsite systems at those establishments. These malfunctioning systems have resulted from installation of undersized systems at these facilities and the increased strength (concentration of pollutants) of the

wastewater (which is addressed through proposed amendments to N.J.A.C. 7:9A-8.1). The proposed amendments will more accurately reflect the correct design volume and will result in properly engineered and regulated systems.

The Department is proposing to change various terms used in the provisions describing the procedure for calculating the volume of sanitary sewage from an individual subsurface sewage disposal system. The proposed amendment at N.J.A.C. 7:9A-7.4(a) explains which criteria should be used for single residential structures and for structures that have wastewater generating activities other than those associated with single residential use. The proposed amendment clarifies that these criteria are based on the wastewater generating activities at these structures. The Department is proposing to substitute the new term “single residential occupancy activities” instead of "private residential sources" used in the existing rules to describe traditional, permanent residential structures. This change in terminology is consistent with the other proposed amendments to residential activity terms used in calculating design volume based on the type of activities generating sanitary sewage. Other residential structures, such as congregate (community) living spaces and temporary housing are covered in (other than single residential occupancy) categories within proposed new N.J.A.C.7:9A-7.4 Tables 7.4(a) and 7.4(b) and how the design criteria are applied is described in N.J.A.C.7:9A-7.4(d). The Department is also proposing to substitute “establishments which have activities other than single residential occupancy” instead of the term “commercial or institutional establishments” used in the existing rules to describe structures that do not have traditional single residency occupancy activities occurring, such as general assembly structures or office buildings. The proposed amendments in N.J.A.C. 7:9A-7.4(a) also require design volume to be based upon all activities generating sanitary sewage on a maximum use day. N.J.A.C. 7:9A-7.4(b), which

specifies how to estimate the volume of sanitary sewage from private residential sources, is proposed for amendment to change the reference to single residential occupancy activities and is consistent with the changes in methodology for determining design volumes under N.J.A.C. 7:9A-7.4(a) and the new definitions of single residential occupancy activities in N.J.A.C. 7:9A-2.1. N.J.A.C. 7:9A-7.4(b)1 is proposed to be added to describe the list of daily volumes based on number of bedrooms. There exists a paragraph (b)2, but no paragraph (b)1 in the existing rule.

N.J.A.C. 7:9A-7.4(b)2 allows for reduction of the minimum design volume to 200 gpd for dwelling units at deed restricted senior citizen communities or mobile home parks with dwelling units less than 500 square feet in recognition that, as these units were initially designed and constructed, less flow would be anticipated. However, many of the new age-restricted residential units in New Jersey are larger and thus produce greater flows than seen in earlier age-restricted housing. Accordingly, the Department is proposing to amend this subsection to make it clear that the 200 gpd minimum design volume criteria can only be used for the age-restricted communities or mobile home dwellings if there is only one bedroom in these units and use of the minimum design volume must approved by the administrative authority.

As discussed earlier in this Summary to more accurately reflect the appropriate design volume criteria, the Department is proposing to amend N.J.A.C. 7:9A-7.4(c) to specify the proposed new method of calculating the volume of sanitary sewage based on type of activity generating sanitary sewage utilizing the proposed new Tables 7.4(a) and 7.4(b). The proposed amendments specify how the total design volume should be calculated for establishments which have activities other than single residential occupancy. The total design volume from these establishments is proposed to be determined from all of the expected activities generating sanitary sewage at the facility, multiplying the volume from those activities (in gallons) per unit

per day by the anticipated appropriate number of units (such as persons, seats, employees, and sinks). Tables 7.4(a) and (b) identify the applicable units fore each specified activity.

N.J.A.C. 7:9A-7.4(d) currently contains the list of criteria used to calculate volumes projected to occur from specified types of establishments and indicates how volumes are to be calculated for a type of facility that does not fit into one of the listed types of establishments. Consistent with the previously described proposed shift to calculation of projected volumes based on the range of activities occurring at a facility, rather than just the general type of facility, the Department is proposing to delete the current criteria used to calculate projected flow by facility type and is also proposing to change the options available for calculation of flow where activities to be conducted at a facility do not fit into the activities listed in proposed Tables 7.4(a) and (b). The proposed amendments to N.J.A.C. 7:9A-7.4(d) reword the opening paragraph to specify that if the administrative authority determines that the activity is not listed in Tables 7.4(a) or 7.4(b), nor a TWA issued, the administrative authority will direct the applicant to apply to the Department for a TWA for the determination of the total expected design volume. The Department will determine the most appropriate design volume based on the activities proposed at the facility. Therefore, the proposed amendments eliminate the ability of the administrative authority to determine flow based on actual water use data unless a TWA is issued. The current rule allows the use of actual water use data calculations only in cases where a proposed project does not fall within currently listed criteria. However, applicants have historically convinced administrative authorities to approve undersized systems based on inappropriate actual flow estimates or water use data that is averaged from multiple sources and, therefore, do not accurately represent the proposed facility or the activities generating sanitary sewage that will occur. For example, many fast food restaurant projects have argued that the existing criteria are

excessive since water use at a fast food restaurant is different from traditional restaurants. However, the Department has collected data from existing restaurants that demonstrates that this is not always correct. Although water use is different to some degree the total maximum daily flows are often similar, especially when a facility is located in a high traffic area. This approach has allowed applicants to circumvent the Water Quality Management Planning requirements at N.J.A.C. 7:15 and the NJPDES permitting requirements of N.J.A.C. 7:14A by misapplying data to demonstrate that facilities with listed criteria may occasionally show an average flow of less than 2,000 gallons per day. The Department has proposed to review actual water use data and other documented proposals for alternative determinations of volumes of sanitary sewage through the TWA process identified at N.J.A.C. 7:9A-3.9. The proposed amendment satisfy the recognized need in some applications to use actual water use data for those facilities that legitimately require an alternative method to calculate expected volume of sanitary sewage but also ensures that the volumes determined are adequate. This will also create a review process that will aid in establishing future design criteria for activities that do not have listed criteria and provide administrative authorities and applicants with a written determination documenting the determined design volume from the Department, in writing, on a Statewide, consistent basis.

Existing N.J.A.C. 7:9A-7.4(d) also includes a list of criteria for determining volume of sanitary sewage for non-residential sources. The Department is proposing to delete the listed criteria at N.J.A.C. 7:9A-7.4(d) and create new Tables at N.J.A.C. 7:9A-Table 7.4(a), Primary Design Criteria and 7.4(b) Additional Design Criteria at N.J.A.C. 7:9A-7.4. These proposed amendments to this subsection and the proposed new tables will improve the method of calculating non-residential design flows without substantially affecting any changes to the existing criteria resulting in a more accurate projection of the volume estimated to be generated

on a maximum use day and assures that the system approved to treat the sanitary waste is adequate.

Proposed new N.J.A.C. 7:9A-7.4(e) stipulates that when a facility proposes the use of holding tanks, temporary restrooms or portable toilets, the cumulative design volume is not reduced. The only exception is during construction activities in which portable toilets, temporary restrooms or holding tanks might be used. Temporary holding tanks may be used in accordance with N.J.A.C. 7:9A-3.12 during the repair or alteration of a malfunctioning system. These holding tanks are exempted because overall flow for the facility to be constructed or being repaired has already been calculated for the entire property and accounted for in another system on the property. The installation of a permanent holding tank requires a TWA (see N.J.A.C. 7:9A-3.12). The Department is proposing this new subsection to make sure that the use of a holding tank, temporary restroom or a portable toilet is not construed as a means to reduce the calculated total volume of sanitary sewage generated from activities at the facility. However, if an office building has adequate sanitary sewage capacity for all employees, including those at remote locations, and their activities that generate sanitary sewage yet wants to provide a portable toilet for a maintenance employee at a remote location, the use of that portable toilet is not subject to these requirements.

Proposed new N.J.A.C. 7:9A-7.4(f) requires facilities with commercial food service, golf course, country club, prison, hospital, funeral home, hotel, campgrounds and laboratory related activities apply to the Department for a TWA to determine design volume since they can vary greatly in the volume of the sanitary sewage generated. Likewise, these establishments do not have design volume associated with them in the proposed new Tables 7.4(a) and 7.4(b). These activities are listed in the proposed new N.J.A.C. 7:9A-7.4(f) since they are part of the existing

rule or referred to in Department guidance material. In the regulated community, there has been disagreement in estimating the expected volume of sanitary sewage. The Department has found that the total volume associated with the activities at these facilities is typically in excess of 2,000 gpd and calculation of design volume should be reviewed under the TWA approval process if one is proposed with a design volume less than 2,000 gallons. A system may only be approved by the administrative authority after the issuance of a TWA by the Department if the volume is determined to be less than 2,000 gpd.

Proposed new Table 7.4(a), Primary Design Criteria and Table 7.4(b) Additional Design Criteria, replace the existing criteria in N.J.A.C. 7:9A-7.4(d) which listed the method of estimating design volume based on type of establishment. The proposed new Tables list the activities generating sanitary sewage from facilities other than single residential occupancy, which are calculated in accordance with N.J.A.C. 7:9A-7.4(b), and the criteria to be used in calculating estimated daily volume as prescribed in N.J.A.C. 7:9A-7.4(c). The Department proposes to list in proposed Tables 7.4(a) and 7.4(b) activity types generating sanitary sewage and their associated volumes to serve as the basis for establishing total expected volume. The new design criteria remove the confusion associated with listing the precise names of establishment types. Definitions and the scope of these activities listed in Tables 7.4(a) and 7.4(b) are specified in the new definitions at N.J.A.C. 7:9A-2.1 and must be used carefully in conjunction with using the criteria in the tables as required for the calculation in N.J.A.C. 7:9A-7.4(c). The sources of sanitary sewage that are proposed to be used in calculating daily design volume include the following activities: commercial use, general assembly, congregate living, warehouse, education/child care and vehicle service. The sanitary sewage from these facilities is from restroom use. There are additional sources of sanitary sewage that can be associated with

an establishment such as food service with a cafeteria only for employees or commercial space in a mini market at a vehicle service station with fuel pumps. These extra sources of sanitary sewage must be added onto the primary design volume for the primary activity occurring at the establishment or multiple primary activities occurring at one location. It is also noted that if the mini market also prepares food for customer consumption and not just prepackaged foods for retail sale, it would be considered commercial food service and by definition in N.J.A.C. 7:9A-2.1 and N.J.A.C. 7:9A-7.4(e), a TWA would be required for determination of design volume.

The proposed new congregate living criteria in Table 7.4(a) seeks to combine a number of existing criteria, including, but not limited to boarding house; camp, cottage (barracks type); dormitory, bunkhouse; rooming house; and school, boarding. As the definition of the term in N.J.A.C. 7:9A-2.1 states, for the purposes of designing an onsite system this category also includes group homes, which are regarded as single-family homes by many regulatory agencies, but operate very differently than a traditional single-family home in terms of the wastewater that is discharged. The proposed changes would require the use of multiple criteria for these types of facilities. For example, if a group home was proposed the baseline criteria of congregate living would apply 130 gallons per sleeping unit (i.e., that is, bedroom) assuming no more than 2 beds (i.e., that is, individuals) would be using each unit. If three or more beds per unit/room were proposed, 50 gallons per bed would be required. Additional flows would then be required for employees per eight hour shift, private access restrooms, showers, food preparation and laundry facilities and any other applicable wastewater generating activity that might be proposed for the specific facility based upon the amenities that are to be present.

Proposed Table 7.4(a) includes an expansion to the design criteria for the existing type of establishment for auto service stations to the proposed new category of vehicle service to account

for automobiles as well as trucks, boats and other vehicle servicing. In addition to the existing criteria of 10 gallons per car served on a maximum use day, the proposed amendment includes a separate, but additional, design criterion of 125 gallons for each fueling position available at those vehicle service facilities that offer fueling services. This is not based on each pump that is present, but rather the maximum number of positions for vehicles that can be fueled at one time. The proposed criterion is consistent with the Department's current, on-line guidance at http://www.state.nj.us/dep/dwq/pdf/faq79a.pdf, which was issued October 8, 2003. The criteria were developed using a number of facilities that collected actual water use data throughout the State. An ongoing analysis of selected facilities with vehicle fueling services continues to demonstrate the appropriateness of those criteria.

Table 7.4(b) also stipulates that the minimum criterion that may be permitted by the administrative authority for anything other than single residential occupancy is 350 gallons. This is equivalent to the minimum for a single family home that is not age restricted or a mobile home with less than 500 square feet of living area. The Department believes this to be appropriate in order to prevent the construction of large realty improvements on small properties leaving property owners severely restricted with regard to the use of the property. Many areas of the State have turned to converting unused commercial space into residential housing and this method provides for at least that conversion to occur on a minimal basis. However, an applicant is provided with the opportunity to construct a smaller system through a Treatment Works Approval issued pursuant to N.J.A.C. 7:9A-3.9.

The footnotes to Tables 7.4(a) and 7.4(b) clarify the use of the activities to determine design volume and stipulate conditions on applying and combining the activities listed. For example, the footnotes to the Tables specify that volume from restrooms is included as part of

the commercial use activity category, but that additional flow should be added if amenities such as showers are available for employees. Another example is for medical or veterinary commercial uses that fall under commercial use but in addition to the employees present on a daily basis, there are patients that generate sanitary sewage and this additional source must be incorporated. An additional five gallons of sanitary sewage much be incorporated into the calculations of maximum daily design volume for these types of establishments. This criterion is derived from the public access restroom criteria, which is similar to patients at a doctor's office who are at the facility, on average, for a very short period of time. While many patients do not use the restrooms personally, this additional flow also accounts for additional wastewater flows such as hand washing by doctors and nurses between each patient attended, which is not accounted for in a typical office setting. Likewise for kennels or veterinary facilities with kennel services, an additional 10 gallons per animal must be incorporated into the design calculations. This flow value was derived through analysis of actual water use from a number of facilities and working with outside private interests like the American Kennel Club. This criterion has been used as a guideline informally by the Department to assist applicants in determining an appropriate design volume for these types of wastewater generating activities.

The proposed criteria for laundry criteria and associated footnote 11were derived partially from the existing rule with respect to the 50 percent increase criterion. However, since many facilities may choose to use a commercial grade unit, the Department looked at the anticipated discharge from average commercial grade coin operated laundry facilities and determined than an average volume of 550 gallons per unit is appropriate as an alternative to the 50 percent increase requirement in the current rule.

By reviewing the full range of types of activities that generate sanitary sewage at a facility and requiring calculations to be tailored to these activities, the rules assure that calculated design volumes better reflect what will actually occur at the facility. This method of determining design volumes assure that the calculations are neither over-estimated for small facilities providing limited services nor under-estimated for larger, multi-service facilities as may occur if volumes are calculated solely based on the predominant activity at the facility. The proposed new method for calculating design volume that uses the criteria in the proposed new table provides for similar daily design volumes as currently prescribed in the existing rule, but is a lot more straightforward and easier to use and removes the ability for misinterpretation. Both the current method of estimation in the existing N.J.A.C. 7:9A-7.4(d) and the proposed daily volume per activity or source generating sanitary sewage in the proposed new Tables 7.4 (a) and 7.4(b) are consistent with the volumes recommended in USEPA's Onsite Wastewater Treatment Systems Manual (EPA/625/R-00/008 February 2002).

N.J.A.C. 7:9A-7.5: Separate disposal of greywater and blackwater

The proposed amendment at N.J.A.C. 7:9A-7.5 updates the citation to the Uniform Construction Code, Plumbing Sub-code, which is out of date.

N.J.A.C. 7:9A-7.6:Type of system

The Department is proposing to amend N.J.A.C. 7:9A-7.6 to delete the first sentence and replace it with a statement that reinforces the definition of a system in accordance with N.J.A.C. 7:9A-2.1 with a straightforward statement that only systems (that meet the definition) can be approved by the administrative authorities. This proposed amendment reinforces existing administrative authority while making it clearer by reference to a definition of what falls under their authority to review. This proposed amendment also stipulates that seepage pits may only be

used to correct noncompliant malfunctioning systems to be consistent with the proposed amendments to N.J.A.C. 7:9A-3.3 and 3.4 and the new terminology of noncompliant malfunctioning.

Subchapter 8. Pretreatment Units (Proposed heading: Pretreatment Components)

Existing Subchapter 8 covers the requirements for the pretreatment units of subsurface sewage disposal systems, specifically septic tanks and grease traps. The Department is proposing to change the subchapter heading to be "Pretreatment Components" and add more specific requirements to these pretreatment components. This new heading will be consistent with the proposed new definition of "component" and with the proposed amendments to the definition of "system" at N.J.A.C. 7:9A-2.1. The subchapter is being amended to increase the specifics on the standards for these components, the testing requirements, and provisions for a new category of pretreatment, specifically, advanced wastewater pretreatment components.

N.J.A.C. 7:9A-8.1: Grease traps (Proposed heading: Grease removal components)

N.J.A.C. 7:9A-8.1 provides standards applicable to grease traps, which are devices that intercept grease present in sanitary sewage, congeal it by cooling, accumulate it and store it for pump out and disposal. This section describes the requirement for grease removal components, how they are approved and what the standards are for their use. The Department is proposing to change the section heading to reflect the proposed amendments which expand the scope of this section to include the broader category of grease removal components.

N.J.A.C. 7:9A-8.1(a) specifies the types of facilities that are subject to this section and prohibits the use of garbage grinding equipment where grease removal components are required. The proposed amendments do not affect the facilities currently subject to the grease removal requirements. The Department is proposing to amend N.J.A.C. 7:9A-8.1(a) to require the use of

active grease removal pretreatment in addition to passive grease traps at these facilities. Active grease removal components are designed and installed to remove fats, oils, grease, suspended solids, biological and chemical oxygen demand by chemical or biological processes to levels associated with residential strength sanitary sewage. Since active grease removal components remove the constituents in sanitary sewage from food preparation activities not normally found in residential sanitary sewage, this proposed amendment ensures that the wastewater from facilities that generate large quantities of grease will be within the expected range of quality to that is anticipated with typical residential sanitary sewage. This proposed amendment is in response to the high rate of system malfunctions at these facilities due to the high strength of sanitary sewage discharged from food preparation activities.

The Department is proposing to amend N.J.A.C. 7:9A-8.1 to add new subsections (i) through (l). The proposed new subsections specify the conditions for the installation, operation and maintenance of active grease removal components. Proposed N.J.A.C. 7:9A-8.1(i) allows the administrative authority to approve an active grease removal if a septic system designer has demonstrated and certified that the active grease removal component will be able to achieve the listed wastewater quality design criteria prior to the discharge to the disposal field. The effluent water quality design criteria listed in N.J.A.C. 7:9A-8.1(i) are consistent with the wastewater quality from average private residential discharges as presented in EPA's *Onsite Wastewater Treatment Systems Manual* (EPA/625/R-00/008) issued in February 2002. This document states that "Restaurant wastewater…contains substantially higher levels of organic matter, solids and grease compared to typical residential wastewater." and "total suspended solids and grease concentrations in restaurant wastewaters were reported to be 2 to 5 times higher than the concentrations in domestic wastewaters." Soil clogging has been shown to be dependent on

organic mass loadings such as grease. Accordingly, by providing treatment of this high strength sanitary sewage to equal typical residential strength wastes, the rate of malfunction should decline. The requirement to install this active pretreatment technology will only be required for the construction of new or expanded facilities listed in N.J.A.C. 7:9A-8.1(a) or when these systems are malfunctioning in the disposal area.

Proposed new N.J.A.C. 7:9A-8.1(j) clarifies that a septic system designer that certifies an active grease removal component must specify how the grease removal components he or she is certifying are installed and maintained to achieve the effluent design criteria proposed at N.J.A.C. 7:9A-8.1(i). Therefore, if there are any changes by the owner/operator of the establishment or installer, the professional engineer will not be held liable unless he or she otherwise approved any changes to the installation or maintenance of the components. This proposed new stipulation assures that it is only those components and their arrangement that the administrative authority is approving. While it is envisioned that most system designers will refer to the manufacturer requirements for system maintenance, it is possible that additional maintenance requirements will be specified by the design engineer to maximize the design's efficiencies. However, by requiring these specifications on the designs, the administrative authority can be assured that these maintenance provisions were considered by the system designer and further serves to notice the system owner of the need to and how to properly maintain the system.

Proposed new N.J.A.C. 7:9A-8.1(k) requires that all active grease removal components include audio and visual alarms to assure that the components do not reach capacity and the chance of malfunction. When these components are indicated to have reached 75 percent capacity as indicated by the alarms, the proposed new subsection requires the operator of the

facility to remove the grease immediately and dispose of it in accordance with all local, State and Federal requirements. Examples of requirements that would need to be complied with section include the New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and the New Jersey Pollutant Discharge Elimination System rules (N.J.A.C. 7:14A).

Proposed new N.J.A.C. 7:9A-8.1(l) uses the new concept of noncompliant to reinforce that required grease removal components must be operated and maintained in accordance with the administrative authority's approval. This proposed new subsection states that a grease removal component that is not operated or maintained in accordance with the administrative authority's approval or the manufacturer's specifications will be considered non-compliant with the chapter.

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

N.J.A.C. 7:9A-8.2 specifies requirements that must be met where a septic tank is part of the wastewater disposal system. The Department is proposing amendments to the septic tank requirements that will not only update the design standards to protect water quality, but clarify the regulations for septic tanks.

The Department is proposing to amend N.J.A.C. 7:9A-8.2(a) to remove the conditions in which an aerobic treatment unit may be used in lieu of or in addition to a septic tank. Aerobic treatment units are proposed to be considered advanced wastewater pretreatment devices which are now addressed under proposed N.J.A.C. 7:9A-8.3.

The Department is proposing to amend N.J.A.C. 7:9A-8.2(c) to specify that a multiple compartment septic tank is required and minimum capacity requirements must be satisfied when a design conveying sanitary sewage to the septic tank by means of a sanitary sewage ejector pump is used or proposed. Currently, both a multiple compartment septic tank and an increase in

the liquid storage capacity of the tank is required when a garbage grinder (garbage disposal) is to be used in the house. These requirements are necessary to address the increased sanitary sewage strength (commonly represented by total suspended solids and increased biological oxygen demand) that must be processed by the sanitary sewage treatment system when ground garbage is introduced into the system. A sanitary sewage ejector pump, which grinds up solids and increases the total suspended solids loading to the septic tank, puts similar stresses on the system, making these additional requirements necessary to assure that water quality is protected and the system will maintain the required level of treatment.

The Department is proposing to amend N.J.A.C. 7:9A-8.2(i)4, which specifies the minimum dimensions for septic tanks. The Department is proposing to delete the current separate specifications for upright and horizontal cylindrical tanks and replace them with a single minimum length and width requirement. The proposed amendments reflect modifications to septic tank designs as recommended by the USEPA as presented in its *Onsite Wastewater Treatment Systems Manual* (EPA/625/R-00/008) issued in February 2002. This Manual recommends against upright cylindrical tanks due to the short distance between the inlet and outlet of the tanks. Although the Department is not prohibiting the use of these tanks, it is requiring that they be constructed to maintain the same inlet and outlet distance as required for horizontal cylindrical tanks. This section currently includes a minimum requirement for a diameter of upright cylindrical tanks. In light of the proposed minimum length and width requirements of 72 and 36 inches, respectively, applicable to both upright and horizontal cylindrical tanks, the minimum diameter requirement is no longer necessary. The proposed amendment specifies that the length of a cylindrical tank shall be determined based upon

measurement of the inside length of the tank. This will assure that the tank contains adequate volume and has the correct dimensions for appropriate retention time to perform as required.

N.J.A.C. 7:9A-8.2(j)3 is proposed for amendment to increase the use of septic solids retainers or septic effluent filters. These devices retain solids that do not settle in the tank preventing them from moving from the septic tank to the disposal field, protecting the field from premature failure and clogging and protecting the State's water resources by assuring that systems continue to work as intended. Therefore, the Department is proposing to amend N.J.A.C. 7:9A-8.2(j)3 to require that a septic solids retainer or septic effluent filter be required in all new tanks at the septic tank’s outlet to the disposal area. This will be required for all new tanks whether installed in a new, repaired or altered system. A solids retainer or effluent filter effectively prevents solids from being released to the disposal field, and, although a gas deflection baffle is not as effective in preventing disposal field clogging, when used in conjunction with an outlet tee or baffle, may be still be used in existing tanks. These septic solids retainers or septic effluent filters may also be used as an alternative to a baffle or tee connection in an existing septic tank. The proposed amendments allow for the voluntary use of a septic solids retainer or septic effluent filter as a conforming component to repair existing septic tanks. The term "septic effluent filter" has been added in the areas in this paragraph that currently refer to a "septic solids retainer" since both achieve the same purpose of collecting solids and preventing them from leaving the septic tank. System owners will be protected from incurring the excessive costs of replacing prematurely failing disposal fields by installing these filters in a new tank typically costs less than $100.00.

The Department is proposing to amend N.J.A.C. 7:9A-8.2(l)2 to remove the current option for manhole covers to be located up to six inches below grade and instead require that

manholes for new tanks be brought to and maintained at grade (level with the ground) and that the manhole cover or riser be labeled, by means of an attached marker, with information regarding the administrative authority name and permit number, installation, capacity and type of the system. The size of the marker is proposed to be changed from three inches in diameter to six square inches to provide flexibility in the marker size and shape while providing sufficient area to make the marker readily noticeable and large enough to include the necessary information which provides baseline data necessary for inspecting or troubleshooting a system. These amendments are proposed to 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 proposed amendments will assure that homeowners and septic system inspectors will be able to find information about the system that is present more efficiently and effectively than relying on guesswork and assumption, which currently is often the case. These amendments also assist homeowners that elect to service their own septic tank effluent filters (see proposed amendments to N.J.A.C. 7:9A-8.2(j)), which are periodically rinsed off into the septic tank. By the regulation's requiring that risers be constructed and maintained at grade and labeled, not only will professional service personnel and homeowners be aware of the exact location of the septic tank access, but they are also provided with easy and direct means to access the system for maintenance. The proposed amendment is consistent with EPA's *Onsite Wastewater Treatment Systems Manual* (EPA/625/R-00/008) which recommends that septic tank manhole risers be installed to grade. The Department is additionally proposing to amend N.J.A.C. 7:9A-8.2(l)2 to delete the list of materials that may be used to construct manhole covers and replace this list with a requirement that the materials used be those specified by a septic system designer to provide a water-tight seal which will result in

preventing water from getting into the tank via the manhole riser and cover. This proposed amendment provides flexibility to use materials other than concrete for manhole risers and inspection ports on concrete tanks. The proposed amendments also replace "licensed professional engineer" with the newly defined term "septic system designer" to be consistent with the rest of the proposed amendments to the rules incorporating defined septic professionals titles in the appropriate places.

The Department is proposing to amend N.J.A.C. 7:9A-8.2(l)3 similar to the amendments proposed previously in this section to deal with the addition of the term "effluent filter" and to ensure that adequate consideration is given in the design for maintaining those devices. If adequate room is not provided to access the device, maintenance will not be possible. This would result in a condition where sewage would back up into the house, preventing damage to the disposal area, but with no way to resolve that backup without either extensive and expensive work to access the device for servicing and may further result in permanent removal of the filter to avoid that problem from recurring. This typically also results in flushing additional solids into the field and causing the field to malfunction prematurely. To accomplish this the Department is adding a new sentence that requires where septic solids retainer or effluent filters are being used that the inspection port must be large enough to provide maintenance for that device or be located under a manhole for this purpose.

The Department is proposing to require watertightness testing of all septic tanks (including all risers and inspection ports) after they are installed and before system startup at the new proposed N.J.A.C. 7:9A-8.2(m) and to recodify the existing text regarding the backfilling of septic tanks currently in N.J.A.C. 7:9A-8.2(m) as N.J.A.C. 7:9A-8.2(n). Watertightness testing after installation is recommended in EPA's *Onsite Wastewater Treatment Systems Manual*

(EPA/625/R-00/008) and this proposed amendment at N.J.A.C. 7:9A-8.2(m) ensures that new tanks will achieve the existing regulatory requirement that all tanks be watertight and that they are demonstrated to be watertight. Currently, the rules require that all septic tanks be watertight at N.J.A.C. 7:9A-8.2(e)1., but are not specific to how that is demonstrated. The proposed new subsection identifies the procedures to be utilized for testing for watertightness, which include ASTM C-1227 available at their website at http://www.astm.org/Standard/index.shtml or National Pre-cast Concrete Association (NPCA) testing methods for concrete tanks specified in NPCA's Precast Concrete On-site Wastewater Tank Best Practices Manual which is available on their website at http://www.precast.org/technical-services-overview. Both ASTM C-1227 and the NPCA standards specify procedures that are to be followed to test a tank after it has been installed in the ground to assure watertightness. These methods include how tests are to be conducted either using hydrostatic tests, by filling the tank with water which it must hold for a specified period of time, or vacuum tests, by sealing the tank and using a vacuum to a stabilized pressure inside the tank for a certain period of time. The NPCA criteria also provide a frequency of testing tanks for septic tank manufacturers to provide quality assurance; however, that frequency does not apply to this requirement. The methods additionally specify what standard must be satisfied for the tank to be considered watertight. Tanks made out of other materials must either use ASTM methods or a method approved by the manufacturer of the tank that demonstrates that the tank has been installed watertight. Watertightness is essential to the proper functioning of a system as well as protecting water quality. The ability for ground water to enter a leaking tank will increase the hydraulic loading to the disposal field and the ability of untreated or partially treated effluent to seep out of a leaking tank will jeopardize ground water quality. This proposed new requirement will help ensure that property owners are receiving properly

installed septic tanks, which they paid for, and that protect the environment. The Department is aware of many manufacturers that insure that their tanks are watertight in the factory before being delivered, so when installed in the ground, most installers do not test them for watertightness after sealing the lid. This poses many problems, since damage to the tank or to the lid could occur during transit. Additionally, installation practices could disturb the integrity of the tank. By requiring that the tank be demonstrated to be watertight after it is placed in the ground, the amendment will assure that any problems that have occurred will be repaired by the installer before back filling. N.J.A.C. 7:9A-8.2(m)3 specifies where the water for the test shall be obtained from and if the water is reclaimed water, there must be approval under a NJPDES Reclaimed Water for Beneficial Reuse permit. N.J.A.C. 7:9A-8.2(m)4 recommends against using onsite potable water from a well due to the potential damage from burning out well pumps or other damage from over pumping. Since septic tanks must be at least 1,000 gallons in capacity and a typical home water use is significantly less than 1,000 gallons per day, it is not unreasonable to expect that individuals performing these tests would want the water levels in the tanks be brought up as quickly as possible without concern for analyzing the well age and construction to determine the capacity of that well. Many wells predate the current requirements to maintain well construction records and may not meet today's Standards. Therefore, if an onsite well is to be used, the Department is proposing a means by which to use that water supply in the proposed new 8.2(m)5, which specifies the rate at which water must be pumped from the well for the test. Particularly, water must be pumped at no more than 50 percent of the design yield of the well so as to minimize the potential for damage to the well.

Existing N.J.A.C. 7:9A-8.2(m) is proposed for recodification to N.J.A.C. 7:9A-8.2(n) with no change in content.

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

The Department is proposing a new N.J.A.C. 7:9A-8.3 to address advanced wastewater pretreatment devices. These devices achieve treatment by microbes which oxidize and decompose the organic compounds in the presence of oxygen. These devices are typically installed after a septic tank and before the disposal field, but may, in some cases, be utilized in place of the septic tank. Advanced wastewater pretreatment components treat the sanitary sewage to a higher quality, lower strength effluent than is produced by a septic tank alone. These devices include, but are not limited to peat biofilters, trickling filters, and sequencing batch reactors. In order for the Department to consider an advanced wastewater pretreatment device to be applicable under this chapter and included on the Department's list of applicable technologies, the manufacturer must submit a request to the Department and provide the Department with a copy of an NSF International Standard 40 and/or Standard 245 certification for their device. However, NSF Standards 40 and 245 are limited to systems with capacities less than 1,500 gallons per day of residential strength wastes. Since this chapter deals with systems up to 2,000 gallons per day and includes some non-residential applications, language has been proposed to allow for these devices to be used in those applications even though those systems can not bear the mark of NSF. To address the issue, the Department is proposing to provide additional, site specific certifications from the manufacturer to identify that their technology has been certified by NSF for smaller systems, and that an analysis of the intended wastewater influent to the system will be adequately treated to EPA secondary effluent standards. In order to facilitate the use of these pretreatment components, the Department is proposing to maintain lists of devices and their manufacturers to assist the regulated community in identifying those manufacturers and

their devices that have certified to the Department their ability to comply with their NSF certifications and this chapter.

The remainder of this proposed section set forth the requirements to design, review, install, and maintain systems using these technologies. These criteria were originally established in technical guidance titled "Aerobic Treatment Systems Guidance Document" issued by the Department in January 2008 (available at http://www.state.nj.us/dep/dwq/owm_ia.htm), limited to approving technologies for correcting existing, malfunctioning systems. Similar guidance has been in existence since April 2004. The current technical guidance document, as was its predecessor, was vetted through a Department-sponsored review group that consisted of health departments, professional engineers, installers, service providers and manufacturers of the technologies.

Proposed N.JA.C. 7:9A-8.3(b) specifies the requirements that a septic system designer must incorporate into the design of a system including advanced wastewater pretreatment prior to submission of the design to the administrative authority. One of the proposed requirements is 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. Requiring that the New Jersey licensed professional engineer designing the system certify that he or she has this specific knowledge presents administrative authorities and property owners with a level of confidence that the system is properly designed. To further assure that the advanced wastewater pretreatment component functions as it is designed to and results in a discharge that complies with the rules,

proposed N.J.A.C. 7:9A-8.3(b) further requires that the design requirements proposed require that the designs comply with all manufacturer minimum requirements and recommendations in addition to the requirements of the chapter where those requirements are not contrary to manufacturer requirements. Additionally, proposed requirements ensure that individual components of the pretreatment device are designed to address the following issues related to system performance: meet the manufacturer's sizing criteria and be water tight to ensure additional water is not entering the system causing potential overloading of the hydraulic capacity of the system and prevent inadequately treated wastewater from being discharged to the environment. The proposed subsection also requires manufacturer review of residential designs in cases where the administrative authority requests this verification. Due to the complexity of non-residential designs and variability of wastewater characteristics (for example; high-strength waste or lack of black water content) for these applications, the septic system designer must obtain a manufacturer endorsement of the proposed design and submit it to the administrative authority as part of the application for approval under this subsection for these systems.

The design requirements proposed also include a provision at N.J.A.C. 7:9A-8.3(b)3 to ensure that all wastewater entering the system passes through the treatment process and that proper alarms are in place to ensure that a bypass does not occur. If a bypass of the treatment process were to occur, inadequately treated wastewater could enter a disposal system that was not designed to receive wastewater of that quality. For example, provisions are proposed in Subchapter 10 to allow for reduced sizing of disposal fields when advanced wastewater pretreatment devices are part of the system prior to disposal. Smaller disposal fields can malfunction very quickly when they receive a higher pollutant loading than for what they were designed.

The remaining proposed requirements of this subsection ensure that the design complies with this chapter. These provisions establish minimum required separation distances from the pretreatment units identical to septic tanks, which are the traditional pretreatment device employed in the current rule. Additionally, with the new proposed requirements for effluent filters at N.J.A.C. 7:9A-8.2(j)3, the subsection provides for the relocation of the effluent filter to suit the specifications of the advanced wastewater pretreatment device manufacturer for optimal pretreatment performance. Further, due to the periodic need to check the quality of the effluent being discharged by service providers, the design must include a method of sampling that will be readily available at the ground surface to minimize costs to service and troubleshoot the system. Because of the need to maintain these systems, the control panel requirements for these technologies are more complex than the pump control panels currently required by the rules at N.J.A.C. 7:9A-9.2. Additionally, due to the smaller disposal area and shorter mound heights allowed in conjunction with the use of these systems, it is imperative to ensure that the units are providing for treatment as designed. Therefore, a means of verifying the continued operation of these treatment units is necessary. Accordingly, control panel requirements to address these types of issues have been proposed at N.J.A.C. 7:9A-8.3(b)6. Similarly, the design needs to include all installation requirements to minimize confusion for the authorized installers bidding on these projects, when they are to be constructed and for the administrative authority that will be inspecting the system during construction and issuing certifications after the completion of construction.

Proposed N.J.A.C. 7:9A-8.3(c) establishes the requirements for installation of systems incorporating an advanced wastewater pretreatment device. The proposed subsection identifies that installation of an advanced wastewater pretreatment device is to be conducted by or under

the direct supervision of an authorized installer (N.J.A.C. 7:9A-8.3(c)1) who is also required to ensure that the required service contract is in place prior to the commencement of installation (N.J.A.C. 7:9A-8.3(c)2). This ensures that the property owner understands the need for, has in place, and agrees to comply with the requirements contained in the service contract, and prevents the system from being started up without a service contract, which would violate the proposed provisions of N.J.A.C. 7:9A-12.3. This proposed provision does not mean that the authorized installer must be present for the installation of the entire system, only the advanced wastewater pretreatment device that is discussed in this section. Other proposed responsibilities of the authorized installer are that the system be installed in accordance with manufacturer minimum installation specifications and the approved design, that all permits and required documentation have been obtained and are present on the site for the duration of the installation, and that all tanks installed are tested water tight after the installation has occurred.

Proposed N.J.A.C. 7:9A-8.3(d) requires that the authorized service provider, with whom the authorized installer ensured a contract has been executed, is present at the system start up with the authorized installer that installed the system, to inspect the system for proper functioning using a manufacturer provided system start up checklist. Completed checklists must then be submitted by the applicant to the administrative authority.

Proposed N.J.A.C. 7:9A-8.3(e) establishes the requirements for administrative authorities to approve the installation of the system within their area of jurisdiction. In order to ensure that these systems will comply with the requirements of the chapter, administrative authorities, or their authorized agents, may not issue any construction approvals unless they receive all information regarding the system and track these systems in a database format and submit the reports to the Department in accordance with the requirements at N.J.A.C. 7:9A-3.15. Also, they

may not certify the system unless they have a copy of a fully executed service contract for the system.

Subchapter 9. Effluent Distribution Networks

Subchapter 9 specifies the requirements applicable to the effluent distribution networks of onsite subsurface sewage disposal systems including provisions for dosing tanks and delivery pipes and dosing networks. The following are the proposed amendments to Subchapter 9 including a new section on products to use in lieu of laterals or filter material.

N.J.A.C. 7:9A-9.2: Dosing tanks

N.J.A.C. 7:9A-9.2(d)8 is proposed to be amended to update the reference to N.J.A.C. 7:9A-8.2 to be consistent with the re-codification of the existing standards for backfilling around tanks from N.J.A.C. 7:9A-8.2(m) to N.J.A.C. 7:9A-8.2(n).

N.J.A.C. 7:9A-9.2(f)7.iv. is proposed to be amended to make it clear that all electrical connections must be located outside of dosing tanks to avoid problems with premature corrosion of electrical connections and avoid problems with respect to working with electrical connections inside of a confined space that contains corrosive and potentially explosive conditions from the presence of methane, hydrogen sulfide and other similar gases. Currently, most administrative authorities do not see designs that locate these electrical connections inside of dosing tanks for the very reasons listed above. However, there is confusion as to what is addressed by the existing chapter and what is permissible under the electrical subcode, for issues not addressed by this chapter. These amendments are intended to eliminate this confusion by making clear that no electrical connections may be made inside of the dosing tank by adding electrical splices and junction boxes to the electrical contacts and relays already required to be outside of the dosing tank.

N.J.A.C. 7:9A-9.2(f)7.v. is proposed to be amended to ensure electrical conduit is used for all electrical service lines to and from the pump control panel, including those between the structure and the control panel, but also between the control panel and the dosing tank. By requiring conduit in all cases ensures that the wiring throughout the entire system is protected from corrosion or physical breakage which often occurs in septic applications due to the shallow depth of installation of these electrical lines coupled with the amount of physical probing and digging around the system associated with routine maintenance and inspection of systems during real estate transactions. The Department consulted with the Department of Community Affairs, which manages the electrical subcode rules, to revise these standards to be consistent with terminology used in the electrical industry.

N.J.A.C. 7:9A-9.3: Connecting and delivery pipes

N.J.A.C. 7:9A-9.3(b) is proposed to be amended to correct the references to the appropriate ASTM standard for ABS plastic (ASTM D-2661 rather than ASTM 2661) to be used in delivery pipes for pressure dosing networks.

N.J.A.C. 7:9A-9.4: Distribution boxes

N.J.A.C. 7:9A-9.4(a) is proposed for amendment to clarify the need for a distribution box for all gravity systems that consist of two or more separate laterals in the distribution network. The proposed amendment removes the phrase “which are not inter-connected” after "between two or more distribution laterals" and inserts the word "separate”" between "more" and "distribution" in the latter phrase to avoid confusion or misinterpretation.

N.J.A.C. 7:9A-9.5: Laterals; gravity distribution

N.J.A.C. 7:9A-9.5(a) is proposed for amendment to create a cross reference to the new section at N.J.A.C. 7:9A-9.8 for products that may be used in lieu of the products required in this section.

N.J.A.C. 7:9A-9.6: Pressure dosing networks

The proposed amendment to N.J.A.C. 7:9A-9.6(a)8 corrects the references to the appropriate ASTM standards for PVC plastic and ABS plastic (D-2661 rather than 2661) to be used in delivery pipes for pressure dosing networks. ASTM withdrew standard D-2662 in 2003, however the D-2662 standard was not appropriate under this section of the rule. The amendments correct the standard to the appropriate ASTM D-2665 standard.

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

The Department is proposing a new section at N.J.A.C. 7:9A-9.8 to provide specifications for products that are utilized in lieu of laterals and filter material. Currently, these products are utilized through a generic TWA, 00-3487-4SG, issued by the Department, available at http://www.state.nj.us/dep/dwq/pdf/00a_graveless_gtwa.pdf. The new section will allow systems that utilize these products to be in conformance with this chapter without the need to be authorized under the generic TWA.

In order for the Department to consider a product in lieu of laterals and filter material to be included on the list of products that can be used without the need to obtain a TWA, the proposed new section requires the manufacturers of these products to demonstrate to the Department the structural integrity of their products through an American Association of State Highway and Traffic Officials (AASHTO) H-10 load rating (16,000 lbs/axle) to demonstrate that the products can withstand physical subsurface conditions that are experienced by laterals and filter material in a traditional septic system. Information on AASHTO load ratings can be

obtained from their website at http://transportation.org. This method of testing products specifies the procedures that are to be followed to test products installed underground to determine their structural integrity after subjecting the area to surficial loads. These procedures include how the tests are to be conducted by driving a vehicle with a particular axle weight over the installed product for a period of time. The product is subsequently evaluated for structural integrity. In order to facilitate the use of these products, the Department will maintain a list of products whose manufacturers have submitted a request to be listed with the necessary documentation. This process is similar to the Department's requirements under the current TWA. However, the Department will not be approving, certifying or otherwise verifying the effectiveness of the products to perform as claimed, but rather will rely on the nationally accepted standard of the H-10 loading analysis to demonstrate the structural soundness of the products. In addition, if a manufacturer wishes to provide for an alternative inlet invert elevation for a product to be listed, the Department will provide an opportunity for the manufacturer to justify that alternative elevation. N.J.A.C. 7:9A-10 requires a minimum of 12 inches between the inlet invert elevation and the level of infiltration, which is essentially the thickness of gravel material below the laterals and above the zone of treatment. This provides for a certain volume of storage of wastewater within the disposal area while the effluent is being treated and dispersed into the subsurface environment. Since there can be a greater volume of storage within these products, providing documentation to the Department that the capacity for storage is maintained is sufficient to justify an alternative inlet invert elevation into these products. These alternative elevations will be included on the list, provided for in this section.

The proposed requirement at N.J.A.C. 7:9A-9.8(b) helps to ensure the proper design and construction of systems using these products. By requiring septic system designers to self-

certify on the plans that they are adequately knowledgeable of the products to design the system, these licensed individuals document their capacity to design systems using these products. Similarly proposed in N.J.A.C. 7:9A-9.8(c), authorized installers will also be required to present documentation from the manufacturer and after January 1, 2012, certification as required by N.J.A.C 7:9A-3.17(a), upon request, at the site of an installation.

The remaining proposed requirements of this section apply to the existing design requirements and technologies related to the spacing of these products, pressure dosing applications, drainage fabric, inlet invert elevations, distribution box placement and inspection ports. The existing rules address the use of laterals over crushed stone, which allows for unrestricted saturation throughout the disposal field. Consistent with this, the Department is requiring that products used in lieu of laterals be spaced in a manner that will allow for complete saturation of the disposal area or in cases when that is not possible, the use of the product area exposed directly with the top of the zone of treatment only. For pressure dosing systems allowed by N.J.A.C. 7:9A-9.6, product manufacturers in some instances require that the orientation of the holes in the pressurized pipe be altered to prevent erosional problems within the system. For distribution boxes, since those boxes are currently required to be installed on gravel within the proposed disposal area, which is absent with these products, this clarification identifies where those distribution boxes are to be installed.

Subchapter 10. Disposal Fields

Subchapter 10 covers the requirements for disposal fields and is proposed for readoption with amendments. The requirements for sizing of disposal fields as well as the construction standards for the different types of installations are specified in this subchapter. The proposed amendments to Subchapter 10 are discussed below.

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

N.J.A.C. 7:9A-10.1 specifies general design requirements for disposal fields, including acceptable options for disposal field installation at N.J.A.C. 7:9A-10.1(b). The Department is proposing to amend N.J.A.C. 7:9A-10.1(b) to clarify requirements for two types of disposal field installation.

The Department is proposing a new first sentence to N.J.A.C. 7:9A-10.1(b) to clarify that disposal fields are not allowed to be constructed in areas with less than 24 inches to any limiting zone. Existing Table 10.1 classifies installations as "unsuitable" in cases where the limiting zone is less than two feet (24 inches). However, nowhere in the existing rule is it specified that this limitation applies to a depth measured from the existing ground surface. The proposed amendment will clarify how the limiting zone is measured (that it is measured from the surface of the ground before any man-made modification or disturbance, such as re-grading). The Department is proposing a similar language regarding how to determine the depth to the limiting zone at N.J.A.C. 7:9A-10.8(b)7 to reinforce the requirement as it applies to drip dispersal systems. Currently, variances to the 24 inch requirement for proposed systems that provide design considerations to account for the shallow limiting zone using advanced wastewater pretreatment and/or disposal technologies and additional technical evaluation of the design is required, under worst case conditions demonstrating that breakout of effluent will not occur downgradient of the disposal field at the surface, wetland, watercourse or other sensitive receptor under the TWA waiver process at N.J.A.C. 7:9A-3.9, which will continue in appropriate circumstances.

At N.J.A.C. 7:9A-10.1(b)4, the Department is proposing to clarify that fill constituting the level of infiltration is to be measured from existing ground surface. The addition of the term

“existing” with reference to the ground surface is consistent with other proposed amendments that use this defined term "existing ground surface". The requirement in the first clause of this paragraph that fill material be placed above the existing ground surface in this type of installation reinforces the further reference to the requirement later in this paragraph that the level of infiltration must be above the existing ground surface. N.J.A.C. 7:9A-10.1(b)5 requires that excavation for a mounded soil replacement disposal installation be below the existing ground surface and is amended to clarify that the excavation must be below the existing ground surface. Further, the Department is clarifying that the level of infiltration must be at or up to four feet above the existing ground surface.

The Department is proposing to change “pre-existing natural ground surface” to “existing ground surface” and the term "existing ground surface" to "ground surface" in footnote (2) of Table 10.1 to be consistent with the proposed amendments throughout the rules to eliminate confusion between the terms.

Advanced wastewater pretreatment devices designed and constructed in accordance with proposed N.J.A.C. 7:9A-8.3 provide treatment within the device and result in a higher level of effluent quality beyond that which a septic tank alone can provide. The Department proposes to add N.J.A.C. 7:9A-10.1(d)5 to provide for a reduction to the required zone of treatment within the disposal field for systems that incorporate advanced wastewater pretreatment devices, at the discretion of the administrative authority. While the advanced wastewater pretreatment device provides for a certain amount of treatment, it does not eliminate the need for an unsaturated zone to provide the final level of treatment needed prior to dispersal of the effluent to the subsurface environment. Therefore, an 18-inch zone of treatment must be maintained.

The Department is proposing a new paragraph at N.J.A.C. 7:9A-10.1(e)3 to allow for a 25 percent aerial reduction in the zone of disposal sizing requirements. The proposed new paragraph would allow for reductions to the bottom area required for the zone of disposal. Proposed N.J.A.C. 7:9A-10.1(e)3 specifies the practical limitations to the design with respect to flow from the zone of treatment to the zone of disposal. Since the reduction in area does not apply to the overlying zone of treatment, design consideration must be given to how to slope the smaller zone of disposal to ensure that effluent passing through the zone of treatment is not trapped or otherwise impeded from flowing freely into the proposed zone of disposal. Including the possibility of a reduction in the area of the zone of disposal was discussed in several Statutory Advisory Committee subcommittee meetings that included design engineers, health department representatives and the Department. Discussions focused on whether a reduction should be allowed and, if it was, how could it be done in a manner that would assure human health and the environment were protected and the system would continue to be fully functional. Based upon these discussions, it was determined that the reduction is warranted because water that has passed through the zone of treatment is essentially free of the suspended solids and microbial growth that can clog up the soil, and the zone of disposal provides the means to move water from the zone of treatment to ground water in the soils. This proposed reduction in disposal area applies only to those soils with demonstrated high rates of permeability and prohibits the use of a percolation test for this purpose. The subcommittee agreed that since this prohibition would be consistent with the existing prohibition at N.J.A.C. 7:9A-10.1(e)2 and due to the disparity in data collection analysis associated with the methods used in establishing permeability rates versus percolation rates. However, allowance for the use of a qualitative basin flood test, where the basin drains in three hours or less, was supported due to the high

permeability rate that must be present in those situations where the basin flood test drains that quickly. Allowance of a reduction in appropriate circumstances will help bring down system costs, since less material and excavation will be required than previously, but in a manner that assures the system will still function adequately.

The Department is proposing to amend the criteria for fill material, often referred to as "select fill", found at N.J.A.C. 7:9A-10.1(f)4 to one that: 1) incorporates a coarser specification for the material without affecting the ability to use material that is currently specified; 2) allows for the use of "select fill" that is more readily available and less labor intensive to create and to properly and consistently use; 3) will most likely be less expensive to obtain over time than the "created mixture" of the existing select fill requirements; 4) reflects criteria and usage similar to many other states; and 5) still performs the same function as intended by the existing specification for "select fill". Use of this alternative select fill specification may currently be authorized by the Department through the issuance of a generic TWA, 03-3487-4SG, available at http://www.state.nj.us/dep/dwq/pdf/00a_select_fill.pdf. The proposed amendments will allow utilization of this fill material without the need for authorization under the generic TWA. This is accomplished by increasing the acceptable range of sand sized grain particles that can be in the fill material from 85 to 95 percent to 80 to 100 percent and allowing for a coarser range of particle sizes. To accomplish this, the rule requires between 50 and 85 percent of particles pass a No. 16 sieve (1.18 mm); between 25 and 60 percent of particles must pass a No. 30 sieve (0.6 mm); between 10 and 30 percent of particles must pass a No. 50 sieve (0.3 mm) and reducing the amount of silt and clay in the fill material from the existing five to 15 percent range down to between two and 10 percent.

In addition to the changes to the percentage make up of the select mixture to accomplish the above goals, the Department is proposing to amend N.J.A.C. 7:9A-10.1(f)4i to specify that coarse fragment content be determined using a No. 8 sieve to resolve a conflict within the existing rule, as described below. This amendment incorporates into this provision the sieve size consistent with the existing definition of "coarse fragment" at N.J.A.C. 7:9A-2.1. The existing definition establishes that a "coarse fragment" is material that will remain on the two mm sieve. A No. 8 sieve is the sieve just above the two mm sieve (a two mm sieve is also referred to as a No. 10 sieve) and therefore any material including the No. 10 sleeve would include the coarse fragments as identified by the existing definition and contradicts this requirement, which is resolved by the proposed amendment.

The proposed amendment to the specification for fill material in the zone of disposal at N.J.A.C. 7:9A-10.1(f)5 is necessary to remove potential confusion regarding the type of material allowed for use within this zone by allowing septic system designers to simply specify one consistent type of fill throughout the disposal area and differentiating how to apply the alternate specification for fill material if two different types of fill material are to be specified. The proposed amendment allows the use of select fill in the zone of disposal that either meets the select fill specifications at N.J.A.C. 7:9A-10.1(f)4 for the zone of treatment or the proposed new listed specification. The existing rule allows material used in zone of disposal to have less silt and clay than is required in the zone of treatment. Although it is not specifically required, it is typical to use the same material in the zone of disposal as in the zone of treatment. The Department is proposing to specifically identify that septic system designers may use the same material in both the zone of treatment and the zone of disposal. The proposed amendment also narrows the specification slightly by restricting the amount of excessively coarse materials to

less than 15 percent by volume or less than 25 percent by weight that could be present in this fill material, often referred to as “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 prohibition 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. To reinforce the Department’s concerns with the use of excessively coarse materials, specifically in the zone of treatment, the Department is proposing to prohibit the use of the term “bank-run which implies a material of alluvial deposition which is high in coarse fragment content, in systems designs in a new N.J.A.C. 7:9A-10.1(f)6 unless a septic system designer includes a specification for that material consistent with N.J.A.C. 7:9A-10.1(f)4 or 5, as applicable. This industry term is engrained within the professional industry in the State and has led to situations where specifications are not being met due to the use of this term in designs when installers purchase materials to construct a system. By prohibiting this term specifically, the Department hopes to eliminate the use of this long used terminology that leads to confusion.

N.J.A.C. 7:9A-10.1(g)3 is proposed for amendment to specify that slope is calculated based upon the existing ground surface when determining whether it is necessary to use disposal trenches instead of disposal beds. Trenches are currently specified to be required in areas where the slope is greater than 10 percent. Pursuant to proposed N.J.A.C. 7:9A-4.4, systems are prohibited in areas where the slope of the existing ground surface is greater than 25 percent The Department is additionally proposing to amend N.J.A.C. 7:9A-10.1(g)3 to reflect this prohibition by specifying that installation of disposal fields using trenches may only occur where the slope is no greater than 25 percent The proposed amendment to N.J.A.C. 7:9A-10.1(g)3 to specify that

slope is determined based upon the existing ground surface also makes clear that the installation of trench disposal is not allowed in areas where the existing ground surface slope is greater than 25 percent but has been re-graded to less than 25 percent. Strict adherence to the 25 percent slope limitation from existing ground surface is important because a site in which the slope is greater than 25 percent poses issues for system accessibility for maintenance and repairs, concerns related to stormwater runoff and structural stability as well as concerns for the hydraulic functioning of the system. The hydraulic functioning and the structural integrity of a system are based on physical, chemical and structural properties of soil. When a site is re-graded, the fill that is used is not considered "natural" and does not possess the characteristics and properties of soil. Therefore, even with re-grading, there can be no reassurance that a system constructed in a location whose pre-existing natural slope is greater than 25 percent can maintain hydraulic drainage capability or remain structurally sound.

Changes at N.J.A.C. 7:9A-10.1(h) is proposed for amendment to delete the superfluous preposition "of" in the first sentence.

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

Currently, Table 10.2(a) in N.J.A.C. 7:9A-10.2 is used to determine the applicable criteria for sizing a disposal field. Because of the significant reduction in biological oxygen demand and total suspended solids that occurs in advanced wastewater pretreatment devices, the soil is relied upon more for dispersal capabilities rather than treatment of effluent. The reduced organic concentration in the treated effluent allows for a smaller sized dispersal system to be relied upon to accomplish hydraulic dispersal of the treated effluent. Therefore, the Department is proposing new N.J.A.C. 7:9A-10.2(a)2 to provide an additional criteria for systems that incorporate advanced wastewater pretreatment devices by allowing these systems to be sized in

accordance with the new Tables 10.2(d) and Table 10.2(e), which provide new minimum sizing criteria for disposal areas. Since the allowance of these additional tables is at the discretion of the administrative authority, septic system designers will have to work closely with those administrative authorities prior to designing these systems to determine the appropriate criteria.

N.J.A.C. 7:9A-10.2 Table 10.2(b) and Table 10.2(c) are proposed for amendment to address how to use the range of numbers of permeability or percolation rates to determine appropriate conversion factors in determining disposal field size when a number falls at the lower end of a range by inserting less than (<) or greater than (>) symbols in the tables. N.J.A.C. 7:9A-10.2 Table 10.2(b) addresses sizing for disposal fields utilizing trenches, while N.J.A.C. 7:9A-10.2 Table 10.2(c) addresses the sizing requirements for the bottom area of the zone of treatment for disposal areas other than those using trenches.

The Department is proposing an amendment to footnote (1) that refers to Tables 10.2(b) and Table 10.2(c) and to the new Tables 10.2(d) and Table 10.2(e). This footnote, which currently specifies that values in the tables for disposal field sizing are to be increased by a factor of 25 percent where a garbage disposal is proposed or being used, is consistent with other conditions on system design as they relate to the use of a grinder/ejector pump. The footnote is proposed for amendment to reflect that systems that include garbage disposal units or grinders/ejector pumps, which similarly grind solid refuse like a garbage disposal, must similarly increase the values utilized in disposal field sizing. The percentage increase to be applied when these systems are present is proposed to be increased from 25 percent to 50 percent. This amendment is consistent with amendments proposed at N.J.A.C. 7:9A-8.2(c), which requires an increase in septic tank capacity by 50 percent and the installation of multiple compartment tank when garbage disposals, grinder pumps or ejector pumps are utilized. Proposed N.J.A.C. 7:9A-

8.1(a) also prohibits the use of a garbage grinder or ejector pump at commercial food service facilities where a grease trap and active grease removal component is required. Utilization of garbage disposals, grinders, or ejector pumps significantly increases the total suspended solids loading and biological oxygen demand on a system and is a significant cause of malfunctioning septic systems. Therefore the size of the disposal field must be increased to handle the increased loading of total suspended solids. The Department believes that this proposed increase in the sizing requirement is necessary and appropriate to be protective against soil clogging and the ensuing hydraulic failure of the disposal field.

The Department is proposing new Table 10.2(d) to provide an alternative minimum sizing criteria of the disposal trench length for systems that incorporate advanced wastewater pretreatment devices for the reasons discussed above. Since the allowance of these alternate tables is at the discretion of the administrative authority, septic system designers will have to work closely with those administrative authorities prior to designing these systems to determine the appropriate sizing criteria. The sizing criteria specified are derived from existing Department guidelines for alterations of existing, malfunctioning septic systems where the administrative authority allows the use of an advanced wastewater pretreatment device to overcome an existing site constraint that would otherwise not meet current requirements. These existing guidelines are available at the Department's website at http://www.state.nj.us/dep/dwq/owm_ia.htm#guidance. The sizing criteria reductions were derived from an extensive review of reductions allowed by other states. Due to the extensive variability with regard to how various states derive their sizing criteria, a simple comparison to New Jersey criteria was not possible. However, an equation used by the Arizona Department of Environmental Quality did provide a method which could be applied to the New Jersey criteria was chosen and provided reasonable reductions that satisfied

both the engineering members of the Onsite Wastewater Management Advisory Committee and the manufacturers of the advanced wastewater pretreatment devices.

The proposed new Table 10.2(e) provides an alternative minimum sizing criteria for the disposal field bottom area for systems that incorporate advanced wastewater pretreatment devices for the reasons discussed above. Since the allowance of these alternate tables is at the discretion of the administrative authority, septic system designers will have to work closely with those administrative authorities prior to designing these systems to determine the appropriate sizing criteria which were derived using the same calculations discussed for proposed Table 10.2(d) above.

Proposed N.J.A.C. 7:9A-10.2(e) restricts the sizing of any disposal field sized in accordance with the new Tables 10.2 (d) and (e) to 400 square feet and requires a reserve disposal area equal to the required size of the disposal field if advanced wastewater pretreatment was not incorporated into the design. As an alternative or in addition to the reserve disposal area, at the discretion of the administrative authority, a deed restriction identifying the needs for advanced wastewater pretreatment maybe required. These restrictions were deemed necessary to prevent those situations where a homeowner decides for any reason that advanced wastewater pretreatment is no longer desired, that there would be some mechanism in place to either provide for enough physical room for a disposal area to be installed using the criteria for systems without advanced wastewater pretreatment and/or some way of identifying to existing and future property owners that the site was developed conditioned upon the use of an advanced wastewater pretreatment device. Since the Department recognizes that there are several ways to implement these safeguards, it was decided to allow the administrative authorities to determine the most effective way to implement these restrictions for their jurisdictions.

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

N.J.A.C. 7:9A-10.3 specifies how conventional disposal fields must be constructed and includes many requirements that are referenced by other sections of this subchapter for constructing other types of disposal fields. The Department is proposing to add an exception for products used in lieu of laterals and/or filter material specified at N.J.A.C. 7:9A-9.8 which may or may not need to include filter material, however that material would be specified by the manufacturer of a particular product. The Department is proposing to amend N.J.A.C. 7:9A-10.3(e)3 to eliminate the use of salt-hay straw or untreated building paper in the construction of all disposal fields. Barrier materials laid over filter material and laterals are necessary to act as a barrier which prevents soils above the filter material from migrating into the filter material, potentially clogging the disposal field. Due to the advancements in engineering and manufacturing drainage fabric, the use of salt-hay straw and building paper has made the use of those materials almost obsolete. Further, in those rare instances when salt-hay straw is used, it is often difficult to ensure the proper thickness of the material is applied across the entire disposal field, which results in either higher construction costs to add additional material or provides the system owner with a system that was not constructed to the minimum standards. Modernizing this section of the rule results in a standard that is easier to implement; systems that are easier to construct; and ensures system owners are getting an appropriately installed system.

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

N.J.A.C. 7:9A-10.5 specifies how mounded disposal fields must be constructed. The existing section allows for the use of a retaining wall or berm of soil material, but does not give any specifications for construction of these improvements. The proposed amendments to N.J.A.C. 7:9A-10.5(e)5 provide specifications on the type of material that may be used when

constructing a berm and how to engineer a retaining wall that is structurally stable in order to withstand physical and hydraulic impacts without the use of subsurface drainage mechanisms. The Department has determined that improperly designed retaining walls could allow breakout of sanitary sewage onto the ground or could topple and cause injury to persons or property. Accordingly, proposed amendments specify design requirements that will prevent these events from occurring. Specifically, proposed N.J.A.C. 7:9A-10.5(e)5 requires that the retaining wall will operate as intended to prevent water movement and be structurally sound. It specifies that the wall must be designed and constructed in a manner to assure that it is stable against hydraulic impacts, and is not any higher (ground surface to top) than the distance to a property line to assure it doesn't damage neighboring property in the event it was to collapse. Proposed N.J.A.C. 7:9A-10.5(e)5iv., v. and vi. require that a septic system designer design, supervise the construction of and certify that the required conditions discussed above are met or the administrative authority may not issue a certificate of compliance. These requirements are to assure retaining walls will be installed as designed to assure the stability of the septic system and will, therefore, assure the owner of the system, neighbors and the administrative authority that the wall will not be negatively impacted by physical or hydraulic impacts and will not endanger health or property.

N.J.A.C. 7:9A-10.6: Specific requirements for mounded soil replacement disposal field installations

The Department is proposing to amend N.J.A.C. 7:9A-10.6(a)3 consistent with the proposed new requirements at N.J.A.C. 7:9A-10.5(e)5 to references of the design and construction requirements specified in N.J.A.C. 7:9A-10.5(e)5 for use when a mounded soil replacement disposal field includes the use of a retaining structure.

N.J.A.C. 7:9A-10.8 (Proposed: Requirements for drip dispersal)

The Department is proposing N.J.A.C. 7:9A-10.8 to provide specifications for drip dispersal. Subsurface drip dispersal is an efficient method for dispersal of wastewater into the soil. It is a precise method for applying wastewater effluent over an infiltration surface in small volume doses throughout the day. The uniformity of the dosing and equal distribution can be designed and operated to provide for unsaturated flow over the entire infiltration area, allowing capillary action to achieve dispersal of effluent not only below the dripperline, but also above and laterally away from each drip emitter. This new section requires effluent to be treated with an advanced wastewater pretreatment device in accordance with N.J.A.C. 7:9A-8.3 prior to entering a drip dispersal system. Due to the relatively low concentrations of biological oxygen demand and total suspended solids that result from an advanced wastewater pretreatment device, the soil is relied upon more for dispersal capabilities rather than treatment or filtering of effluent. Most of the requirements proposed are consistent with those established in the Department's "Drip Dispersal Wastewater Disposal System Guidance Document" issued January 2008 which is available at http://www.state.nj.us/dep/dwq/owm_ia.htm. This document and the guidance document that preceded it (April 2004) were discussed by stakeholders group comprised of health departments, professional engineers, installers, service providers, system integrators and manufacturers. Based upon these discussions, it was determined that minor changes to the 2008 guidance would be appropriate, however these changes are focused primarily on the changes associated with incorporating a guidance document into this rule. The guidance documents still have validity due to their limited applicability to existing systems that are malfunctioning, however modifications to those guidance documents are anticipated following the promulgation of this proposed rule.

Proposed N.J.A.C. 7:9A-10.8(a) sets forth the establishment both a listing by the Department for system integrators to have their pre-engineered designs listed as applicable to the rule and general requirements for the drip dispersal technology that can be used in onsite systems. The requirements include the use of drip tubing and emitters that are manufactured specifically for wastewater applications and includes a proven barrier against root intrusion and biologic barriers, which are a method to inhibit slime buildup. In order to be listed by the Department, each system integrator must submit a written request, its pre-engineered design and a certification that the design conforms to all manufacturer minimum requirements and recommendations and this rule. Additionally, system integrators must make available all necessary documentation regarding their pre-engineered systems. Since a drip dispersal system specifically requires advanced wastewater pretreatment devices, those system integrators that are not specifically associated with a manufacturer of an advanced wastewater pretreatment device, must identify which advanced wastewater treatment devices are acceptable as part of the integration of that device with their pre-engineered system since they will be responsible for ensuring the proper integration of components within the design.

Proposed N.J.A.C. 7:9A-10.8(b) sets forth the general design requirements for all drip dispersal systems. Similar to the proposed requirements for advanced wastewater pretreatment devices at N.J.A.C. 7:9A-8.3, drip dispersal systems must be designed by septic system designers who certify that they are sufficiently knowledgeable to design the proposed system.

The first proposed general design requirement is that all systems incorporating drip dispersal must include an advanced wastewater pretreatment device that meets the proposed standards at N.J.A.C. 7:9A-8.3. While some studies have identified the possibility of discharging septic tank effluent directly to drip dispersal areas, a practice that is permissible in

some states, the Department has observed the highest success rates when drip dispersal systems are preceded by advanced wastewater pretreatment. Therefore, the Department is limiting the use of drip dispersal to applications incorporating advanced wastewater pretreatment prior to disposal of sanitary sewage.

Proposed N.J.A.C. 7:9A-10.8(b)2 requires that all drip tubing products to be warranted against root intrusion for at least 10 years from installation in order for the product to be included in a design submitted by a septic system designer. While this is currently an industry standard for dripperline, the Department wants to ensure that any new drip dispersal technologies are being reviewed by the septic system designer to ensure these products are appropriately warranted according to the industry standard.

Proposed N.J.A.C. 7:9A-10.8(b)3 requires that drip dispersal designs specify that the designed system must be installed only by authorized installers. Authorized installers must secure a written acknowledgement from the property owner that the system is subject to mandatory operation and maintenance requirements, prior to initiating installation as proposed at N.J.A.C. 7:9A-8.3(c). This condition is proposed to limit any confusion as to the responsibility of the authorized installer and the property owner to maintain service agreements (which include maintenance) for the life of the system.

Proposed N.J.A.C. 7:9A-10.8(b)4 through 7 deal with site evaluation criteria specific to drip dispersal systems. Due to the unsaturated flow conditions under which a drip dispersal system operates, it is critical that the surficial soils, in which these systems will be installed, be thoroughly evaluated. Most of these systems should be installed in areas where percolation tests are feasible and can be confirmed with another test, such as a tube permeameter test or soil permeability class rating test. If these tests are not appropriate for the selected location, the

proposed rule does not address those locations and therefore a TWA would be required for the system design (see N.J.A.C. 7:9A-3.9) for alternative soil evaluation and potential design criteria. Further, these proposed requirements specify the required separation distances to any limiting zones (as the term is currently defined). The engineering standard for these systems is to have a minimum of 24 inches of soil in which to discharge between the bottom of the drip tubing and any limiting zone. However, no system may be installed without at least 24 inches between the existing ground surface and any limiting zone. In cases where a limiting zone exists between 24 and 30 inches below the existing ground surface, mounded soil replacement drip dispersal design criteria may be utilized in accordance with N.J.A.C. 7:9A-10.8(c)7. Further, installation of any drip dispersal system is limited to sites where slopes are less than 25 percent. For sites that have slopes between 10 percent and 25 percent, installations must be hand dug or the septic system designer must certify an installation method that is protective of human health and safety and meets all requirements of the manufacturer and the administrative authority. The use of machinery on steep slopes can cause the ground to become unstable and threaten worker safety. Therefore this issue must be addressed by the septic system designer if machines are to be used on the steep slopes. Any installation of any system on sites where the slope of the existing ground surface exceeds 25 percent is required to obtain a TWA from the Department, as is currently provided in the existing regulations at N.J.A.C. 7:9A-4.4(a).

Proposed N.J.A.C. 7:9A-10.8(b)8 requires that the entire system that incorporates a drip dispersal system needs to be pre-engineered. These pre-engineered designs consist of, at minimum, an advanced wastewater pretreatment device as identified in proposed N.J.A.C. 7:9A-8.3, drip tubing, any specialized field fittings, pump / pump chamber components, filtration unit, headworks and a control panel. All piping, valves, fittings, level control switches, and other

components are to be designed and manufactured to resist the corrosive effects of wastewater and common household chemicals. Pre-engineered designs are used in the onsite industry by manufacturers to specify how to size the various components based upon the scope of the proposed project and site evaluation data. Using these pre-engineered designs along with the site specific information will help to provide a level of confidence that systems are being designed in accordance with the system integrator's minimum requirements and specifications.

Proposed N.J.A.C. 7:9A-10.8 (b)9 requires that the system designer maintain the minimum separation distances from the drip dispersal area as required for disposal fields in N.J.A.C. 7:9A-4.3. Proposed N.J.A.C. 7:9A-10.8 (b)10 requires that permanent corner markers of the drip dispersal area be installed at or above grade to mark the boundaries of the field. Disposal fields must have inspection ports at the corners of the bed in accordance with N.J.A.C. 7:9A-9.5(a)6 and N.J.A.C. 7:9A-9.6(a)7, which also delineate the corners of the field. Since these inspection ports are not useful in drip dispersal monitoring, permanent markers at the surface for each corner of a dispersal area is more appropriate for various purposes, including but not limited to, assisting homeowners by identifying areas not to dig; providing system inspectors with a means to identify the aerial extent of the installed dispersal area; and providing authorized service provider with a means to quickly check the areas that are inspected during routine service visits.

Proposed N.J.A.C. 7:9A-10.8(b)11 requires that the system designer also note on the design plans that the drip dispersal system must be maintained in accordance with proposed N.J.A.C. 7:9A-12.3(e). N.J.A.C. 7:9A-12.3(e) specifies the maintenance and monitoring requirements for advanced wastewater pretreatment systems, as well as those for drip dispersal. Authorized service providers are required to maintain these components according to the

manufacturer's and the system integrator's maintenance requirements which includes regular inspection. Inspection includes observing, monitoring and recording the condition of drip dispersal headworks and filters, and servicing the drip dispersal system as needed.

Proposed N.J.A.C. 7:9A-10.8(c) specifies design parameters for the layout of drip tubing. These design parameters include dripperline and emitter spacing, loading rates, installation options and technical considerations specific to drip dispersal technologies. The proposed standards are set at levels to provide for the effective dispersal of effluent to the subsurface environment while assuring protection of human health and the environment. The engineering criteria proposed are consistent with current Department published guidance and the requirements of most other states that allow for the use of drip dispersal. These standards are additionally commonly specified by the manufacturers of drip tubing and their system integrators. In addition to the standard drip dispersal designs, the Department is also proposing additional design criteria for mounded soil replacement drip dispersal systems in this subsection to allow for the use of drip dispersal in cases where limiting zones are present between 24 and 30 inches below the existing ground surface. Drip dispersal is a more efficient means of wastewater disposal than traditional disposal areas and these specifications provide for the use of this technology where, if traditional disposal areas are utilized, extremely significant mounds are required. These systems, due to their lower profile are also more aesthetically pleasing in addition to being more efficient and protective of the environment.

Proposed N.J.A.C. 7:9A-10.8(d) provides for the engineering specifications for the dosing of drip dispersal areas. The engineering criteria proposed are consistent with current Department published guidance and most other states that allow for the use of drip dispersal. These standards are commonly used by the manufacturers of drip tubing and their system

integrators. The engineering standards for dosing drip dispersal areas proposed include time dosing, valve criteria, variability limitations, dosing chamber sizing, control panel and alarm requirements. The proposed standards are set at levels to provide for the effective dosing of effluent to the drip dispersal area in a manner that assures protection of human health and the environment.

Proposed N.J.A.C. 7:9A-10.8(e) establishes the engineering specifications for the filtering and flushing of all drip dispersal systems. The engineering criteria proposed are consistent with current Department published guidance and most other states that allow for the use of drip dispersal. These standards are commonly used by the manufacturers of drip tubing and their system integrators. The engineering standards proposed for filtering and flushing drip dispersal areas include pump sizing, filter selection, filtration and flushing rates and return requirements for flushing/filtration waste and residuals. The proposed standards are set at levels to provide for the effective maintenance of the drip dispersal equipment in a manner that assures proper long term operation of the system which protects human health and the environment from the problems associated with system malfunction.

N.J.A.C. 7:9A-10.8 Table 10.8 is proposed to specify the sizing criteria for drip dispersal systems based upon permeability testing as proposed at N.J.A.C. 7:9A-10.8(c)3 and (c)7v. The Department is proposing criteria that are in line with nationally accepted standards using the existing rule requirements for soil evaluation. As part of the evaluation of drip dispersal technologies for the Department's guidance document, referenced above, the Department consulted with dripperline manufacturers, system integrators, septic system designers and industry professionals. Area loading rates are not standardized throughout the country, similar to the loading rates applied to gravity and pressure dosed disposal fields. However, through

negotiations with the various stakeholders the area loading rates proposed in this table were agreed upon by all parties.

Subchapter 11. Seepage Pits

Subchapter 11 is proposed to be readopted without amendment. This subchapter establishes the requirements applicable to the location, design and construction of seepage pits. Although seepage pits are prohibited for use in new construction at the existing N.J.A.C. 7:9A-7.6, Type of system, seepage pits are proposed to be included in the definition of "disposal field" at N.J.A.C. 7:9A-2.1, and may be allowed as part of the alteration of an existing, malfunctioning system or for greywater systems as identified in existing N.J.A.C. 7:9A-7.6. It is important to keep the requirements in this subchapter since seepage pits are still permitted to be constructed, operated and maintained in certain, limited circumstances.

Subchapter 12.Operation and Maintenance

Subchapter 12 contains the Department's requirements for the operation and maintenance of onsite subsurface sewage disposal systems. The requirements provided in this subchapter are essential to assure that systems designed and installed properly will continue to work as intended. Included in the proposed amendments are new requirements for system maintenance for systems that include advanced wastewater pretreatment as well as the State protocol to be used when inspecting systems during real property transfers.

N.J.A.C. 7:9A-12.1:System use

The Department is proposing to amend N.J.A.C. 7:9A-12.1(a) by adding the word "other" in front of the existing "source of wastes, wastewater or clean water" to reinforce that permitted systems may only receive flows from connections approved by the administrative authority and not from any other source of wastes, wastewater or clean water. All other

connections are prohibited, including, but not limited to, sump pumps, unapproved building additions, and french drains.

N.J.A.C. 7:9A-12.2: (Reserved) (Proposed heading: System maintenance)

The maintenance of an individual subsurface sewage disposal system is essential for proper system function, and, therefore, the resulting protection of water quality and public health. The Department proposes to add a new section to specify requirements for system maintenance. The existing rule at N.J.A.C.7:9A-3.14 requires that the administrative authority notify a system owner of how to maintain the system. However, the existing rule lacks specifications for a system owner to follow in maintaining the system. The Water Quality Management Planning (WQMP) rules at N.J.A.C. 7:15-5.25(e) require Wastewater Management Planning (WMP) agencies to implement a Septic Management Plan (SMP) for areas in their jurisdiction that are served by individual subsurface disposal systems. Additionally, some administrative authorities have adopted ordinances pursuant to N.J.A.C. 7:9A-3.1 to require septic management in their jurisdiction, and the option is still available for administrative authorities who may adopt septic management ordinances in the future. The proposed new section is consistent with N.J.A.C. 7:15 which requires septic maintenance. The proposed new section includes system maintenance requirements designed to ensure that a system continues to work as designed. The maintenance requirements will help prevent malfunctions by assuring that potential problems are identified through periodic inspections and the required pump-outs will help assure systems can continue to function as designed.

Consistent with proposed N.J.A.C.7:9A-3.4 , the proposed new rule at N.J.A.C. 7:9A-12.2 provides that a system that is not maintained in accordance with these chapter and, if applicable, in accordance with an approval issued by either the Department or the administrative authority

(such as TWAs under N.J.A.C. 7:9A-12.2(d) or system approvals under N.J.A.C. 7:9A-12.2(a)), is considered a non-compliant system. The proposed requirement will be in addition to any operation, maintenance and/or inspection provisions specified in TWAs or other approval issued by either the Department or the administrative authority. In addition, the proposed section recommends using the inspection protocols proposed in N.J.A.C.7:9A-12.6. Since septic management programs can vary significantly and do not typically require comprehensive analysis of the entire system typical for new home buyers evaluating a system for purchase, the Department is recommending the use of the protocol for these inspections.

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

The Department is proposing at N.J.A.C. 7:9A-12.3 to specify maintenance and monitoring requirements for systems that incorporate advanced wastewater pretreatment devices in accordance with proposed N.J.A.C. 7:9A-8.3. These proposed requirements apply to those systems that also have drip dispersal since the proposed requirements for drip dispersal systems specifically require the use of an advanced wastewater pretreatment devices. The proposed amendments require a service contract to be in place with an authorized service provider for the technology. The maintenance criteria proposed at N.J.A.C. 7:9A-12.3(c) includes the minimum schedule for conducting service calls, recording of information from maintenance activities and providing that data to the administrative authority, physical conditions at the time of maintenance and baseline performance data regarding the system. Due to the high variability regarding these proprietary technologies, the specifics of maintaining these devices is dependent on the manufacturers. Since the Department has chosen to use appropriate NSF certifications as part of the applicability of these technologies in these rules, the manufacturers are bound by those

certifications, which include maintenance criteria. Further, the proposed criteria are consistent with current Department published guidance and are similar to what is required by most manufacturers and states that allow for the use of advanced wastewater pretreatment devices and drip dispersal.

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

The Department is proposing to propose a new section N.J.A.C. 7:9A-12.6 "System inspection protocol for inspections conducted during real-property transfer". The Realty Improvement Sewerage and Facilities Act (1954) (RISF Act) N.J.S.A. 58:11-23 et. seq. provides authority to the Department to establish practices regarding the oversight of septic systems. Pursuant to this authority, the Department has developed and distributed a document entitled, *"Technical Guidance for Inspection of Onsite Wastewater Treatment and Disposal Systems*" (available at: http://www.state.nj.us/dep/dwq/pdf/inspection_guidance.pdf), which provides a professional protocol for conducting septic system inspections. This document is focused on professional standards for septic system inspections conducted as part of a real property transfer, but has been used by septic system inspectors in other situations as well. This document is based on the original New Jersey Septage Management Association (NJSMA) Standards, who collaborated with the Department and various stakeholders to produce a 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 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 protocol is not intended as a warranty or guarantee that the system will properly function for any period of time in the future, a result that is certified or endorsed by the Department, or an assurance that the soil is adequately treating or will adequately treat effluent.

Proposed N.J.A.C. 7:9A-12.6 formally incorporates this protocol into this chapter. This proposed new section, establishes the minimum requirements for information gathering and procedures necessary to conduct the inspections to be recognized as meeting the Department's protocol for inspections. This professional standard is specified in proposed new chapter Appendix E to the rule. The new section gives reference to the Department's inspection protocol technical manual at N.J.A.C. 7:9A-12.6(f) that describes the methods and procedures in detail. It is anticipated that the existing "*Technical Guidance for Inspection of Onsite Wastewater Treatment and Disposal Systems"* will be modified and adopted as the inspection protocol technical manual following promulgation of this rule. The technical manual is intended to assist professionals in adhering to the inspection protocol in this section and in accordance with Appendix E. The section also mandates a reporting procedure for inspectors and prohibits them from using the terms "failing" or "malfunctioning" in reference to a system under inspection. As discussed in the summary for proposed section N.J.A.C. 7:9A-3.4(d) above, determination as to whether a system is malfunctioning, failing or non-compliant remains within the sole discretion of the administrative authority and the Department.

Proposed N.J.A.C. 7:9A-12.6 addresses 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. Currently, there is no standard for conducting septic inspections. This has led to frequent situations where multiple inspections are conducted at the time of a real property transaction, with multiple results. The proposed new section, by

providing a protocol for system inspections, will provide 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.

The Department intends to reach out to realtors and mortgage agencies, as well as administrative authorities, to notify them of the inspection protocol. These inspection protocols are not required. The Department intends to encourage the realtors and mortgage agencies to adopt and require this protocol.

Subchapter 13: Critical Areas

The Department is proposing a new subchapter 13, Critical Areas. The Realty Improvement Sewerage and Facilities Act (1954) (RISF Act) at N.J.S.A. 58:11-44 through 47 enables the Department to establish critical areas for sewerage facilities. Critical areas are those areas of the State in which restricting or regulating the types of sewerage facilities is essential to public health and well-being, as well as protection of land areas possessing characteristics or features which are important to the maintenance or improvement of water quality. Proposed Subchapter 13 will enable the Department to establish critical areas for the construction of sewerage facilities and codify the process of establishing critical area for the sewerage facilities, facilitating the implementation of the RISF Act. The language proposed for this subchapter comes directly from the Act or is based on language in the Act, updated due to changes in the industry and other regulatory programs which have changed since the last modification of this section of the Act in 1966. The proposed new subchapter establishes how potential critical areas, are identified investigated and established. The purpose of this proposed new subchapter is to identify areas that may not be suitable for certain types of sewerage facilities, establish requirements for remediating existing problems related to existing sewerage facilities in those

geographical areas and establish the requirements for the future use of new and expanded sewerage facilities in the identified critical areas.

N.J.A.C. 7:9A-13.1 Identification of critical areas

Proposed N.J.A.C. 7:9A-13.1 describes how areas will be identified for investigation, explains that the Department will investigate geographical areas, which may vary significantly in aerial extent, and specifies factors will be taken into account in the establishment of critical areas for sewerage facilities. Proposed N.J.A.C. 7:9A- 13.1(a) specifies that, in addition to investigation initiated by the Department based upon its own information, areas to be investigated for potential critical area designation can be identified by public health agencies, including an administrative authority, and any person providing documentation that demonstrates the need for establishing a critical area in a specific geographical area. This documentation could include a survey of the systems existing in the area and identification of impaired sensitive receptors, such as quantitative water quality data on wells or surface waters, in proximity to those systems.

As identified in the proposed N.J.A.C. 7:9A- 13.1(b), there are a wide variety of considerations that will be evaluated to determine if an area may appropriately be established as a critical area. Due to the complexity of issues involved in wastewater treatment and disposal, and the nature of the interaction of sanitary sewage and the environment, the scope of considerations can be extensive. However, it is important to recognize that the analysis is proposed to be based on environmental factors only, as provided in the RISF Act, and not factors such as zoning needs, economics or future planning of the region.

N.J.A.C. 7:9A-13.2 Establishment of critical areas

Proposed N.J.A.C. 7:9A-13.2 describes the process for establishment of critical areas by the Department. If the Department determines that an area should be considered for designation as a critical area, it will determine whether restrictions regarding the types of sewerage facilities that may be located in the area are necessary based upon the impacts to public health and the environment (see proposed N.J.A.C. 7:9A-13.2(a)). Proposed N.J.A.C. 7:9A-13.2(b) describes the process that the Department will follow to seek public participation through public notice(s) and hearing(s) prior to its establishing critical areas and associated restrictions. Following the public participation phase of the process, N.J.A.C. 7:9A-13.2(c) requires the Department to determine whether the area discussed at the public hearing should be designated as a critical area following a 60 day waiting period after the hearing. Proposed N.J.A.C. 7:9A-13.2(c) also indicates that the Department will provide a public notice establishing the critical area which defines the geographic extent of the critical areas and the type of sewerage facilities restrictions to be instituted in the area.

Proposed N.J.A.C. 7:9A-13.2(d) describes how notice of a Department decision to designate a critical area would be published and distributed by the Department. Additionally, a table of designated critical areas is proposed for informational purposes only in N.J.A.C. 7:9A-13.2(e). This table will be updated by the Department through administrative change to identify these critical areas.

Proposed N.J.A.C. 7:9A-13.2(e) states that the Department will publish revised lists of critical areas in the New Jersey Register as well as make them available through the Division of Water Quality's website.

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

N.J.A.C. 7:9A Appendix B includes the Standard Forms for Submission of Soils/Engineering Data to be submitted when applying for a system construction permit. The proposed new amendments to Appendix B revise the information collected by the administrative authorities during the application process for obtaining a permit to construct a system. The proposed new amendments will make it easier for the administrative authorities to compile the annual report for submittal to the Department as required in the proposed amendments to N.J.A.C. 7:9A-3.15 by itemizing each type of permit category with proposed labels a. through h. and by breaking down the categories consistent with the proposed amendments to N.J.A.C. 7:9A-3.15. Similarly, proposed item 8. in Form 1 helps the administrative authority identify and record the various causes of malfunctioning systems. Proposed item 9. helps the administrative authority identify applications associated with the replacement of non-systems consistent with the proposed N.J.A.C. 7:9A-3.16. The addition of the words “and Fill-in” to line 1 of Form 1 draws the applicant's attention to the fact that there are entries that may require more than just a check. The substitution of the word “of” for “in” in Line 1.b. is done for consistency with changes to N.J.A.C. 7:9A-3.3. The “repairs to an existing system” permit category is removed from Form 1 in accordance with the proposed changes to N.J.A.C. 7:9A-3.3. Also proposed is an addition which identifies specifically that the applicant has provided information regarding compliance with the requirements of the Highlands Water Protection and Planning Act (N.J.A.C. 7:38) when applicable.

The Department is proposing to “pre-existing natural ground surface” to “existing ground surface” and change the term "existing ground surface" to "ground surface" in Form 2a to be consistent with the proposed changes amendments throughout the rulerules to eliminate confusion between the terms.

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

Proposed new Appendix E supplements the amendments to N.J.A.C. 7:9A-12.6. This new Appendix provides the standard for conducting system inspections in a consistent manner to ensure that properly functioning systems are not mislabeled as unsatisfactory and the improperly operating systems are adequately identified.

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

Proposed N.J.A.C. 7:9A Appendix F has been added to supplement the amendments to N.J.A.C. 7:9A-12.6. This provides the form on which inspections of onsite wastewater treatment systems must be recorded and submitted to administrative authorities. This will provide a consistent method of submitting information to the local authorities and allow them to compile information efficiently regarding the status of systems within their jurisdiction.

Social Impact

The rules proposed for readoption with amendments, repeals and new rules provide a positive social impact by establishing State minimum standards for the design, construction, operation and maintenance of onsite systems. While local boards of health can adopt ordinances that are stricter than the State minimum requirements by law (N.J.S.A. 58:11-25), the minimum standards established in the existing rules set a minimum threshold for protecting human health and the environment, and a base level of consistency throughout the State. The proposed amendments, repeals and new rules fall into two general categories: instituting an updated septic management program and improving implementation of the existing septic construction standards. The Department expects that both of these efforts will have primarily positive social impacts.

The inclusion of a standardized septic system inspection protocol should have a positive impact on the citizens of New Jersey by providing a means to inspect systems during real property transfers using one uniform procedure. This is in direct contrast to the existing situation where there are no consistent procedures for these inspections. Standardization of the inspection procedures should reduce the opportunity for conflicting inspections being performed by different inspectors, as well as removing the bias incurred by who is paying for the service. Moreover, the administrative authority, as the authorized agent of the local boards of health, will be receiving reports of all inspections conducted in accordance with this protocol, which will in turn be reported to the Department on a yearly basis. The Department can use this information to better identify problem areas and offer appropriate assistance to protect human health and the environment. However, the State is not mandating the use of the Standard. Instead, the Department intends to work with mortgage lenders, title insurance companies and realtors to

identify that if they are requiring an inspection of the onsite system during a real property transfer, those inspections should be required by those institutions to be done in accordance with the State protocol for inspections.

The proposed amendments, repeals and new rules also provide opportunities to further the use of advanced wastewater pretreatment and disposal technologies and thereby provide alternate design options to system owners. Advanced wastewater pretreatment technologies are capable of reducing pollutants and thus improving water quality in situations where substandard or inappropriately located systems are malfunctioning. These proposed amendments, repeals and new rules allow for the use, at the discretion of the administrative authority, of onsite wastewater treatment technologies that have proper certification and/or documentation that are currently not addressed by the rules. The certification required for wastewater pretreatment technologies is from an international certification agency, NSF International (NSF), and will give consumers assurance that if properly constructed, installed, operated and maintained, systems that incorporate these NSF-certified advanced wastewater pretreatment components can perform as well as or better than conventional septic systems. In addition, the Department believes that this process will encourage a stable marketplace for onsite treatment and disposal technology vendors and continued enhancements in technology. The Department feels that by providing more and better options for onsite system design to property owners is a positive social impact, especially in those areas where existing systems are malfunctioning and traditional septic designs can not meet current minimum standards.

The proposed amendments, repeals and new rules enhance the administrative authorities' ability to request additional information in order to make more informed environmental decisions. Local authorities in New Jersey may implement ordinances that are more stringent

than what is required by State rules. Since each jurisdiction in New Jersey varies widely geographically, geologically and morphologically, it is necessary to provide each administrative authority with the ability to require additional information to address the variations that occur throughout the State. Without this ability, the local administrative authority may not be able to obtain sufficient information to determine if a proposed system addresses all of the limitations of a specific site. These proposed amendments, repeals and new rules will have a positive social impact by making it clear that the administrative authority, as the approving agency, has the information necessary to determine if a proposed system is properly located and designed.

The proposed requirement that the administrative authority investigate possible non-compliance or any contradictory information that a permit was based on provides a regulatory basis for it to revoke approvals that were not in compliance with the rules, where the existing rules are currently silent on this issue. This requirement makes the administrative authority's job easier by giving clear direction in those cases where contradictory information is provided. The positive social impact of this requirement is to eliminate any local authority's confusion with regard to responding to situations where systems are being constructed that are not in compliance with the conditions upon which they were approved. For example if a neighbor identifies that an existing well is close to an excavation for a new system and complains to the administrative authority, the administrative authority can clearly require work to stop on the construction of a new system if that well was not properly identified on the application for that new system.

The proposed requirement for the administrative authority to keep records and report in a standardized, electronic fashion to the Department information on systems in their jurisdiction has a positive social impact by supporting efforts for clean water needs reporting to the USEPA. This results in a positive social impact through supporting the Department's efforts to receive

State Revolving Fund monies to support funding of wastewater projects in the State. This funding may be accessed by municipalities to upgrade existing, malfunctioning septic systems. Further, the information collected through this process will also help identify critical area determinations proposed in the new Subchapter 13, Critical Areas. It is the goal of the Department to establish critical areas for regions where existing wastewater systems are problematic to access funds and expedite permitting issues in those areas that truly need assistance, which is a positive social impact to those property owners in those areas with substandard systems.

In addition, the proposed amendments, repeals and new rules update the design criteria for new or altered systems. The enhancements are expected to result in environmental benefits with consequential positive social impacts such as reduced hazards from malfunctioning systems resulting in healthier communities.

The Department believes that through proper system sizing, design, construction, repair, maintenance and the inclusion of the inspection protocol, and consistency with other state regulations, such as N.J.A.C. 7:50, the Pinelands Comprehensive Management Plan, the proposed amendments, repeals and new rules will benefit all residents of the State by helping to maintain or restore water quality in streams, rivers, lakes, estuaries, wetlands, the ocean, and ground water by improving the wastewater quality. Maintaining and improving water quality provides social benefits by protecting access to these resources and activities associated with their use.

Economic Impact

The Department expects that the rules proposed for readoption with amendments, repeals and new rules will have an overall positive economic impact. The current rules provide a positive economic impact by providing a Statewide minimum standard that provides a certain level of consistency throughout the State for individuals and businesses that design, construct, operate and maintain onsite systems. Without these minimum Standards, each board of health would develop their own minimum criteria, which could vary substantially, forcing individuals and businesses that own or work with these systems to deal with substantial variable standards from jurisdiction to jurisdiction. Currently local boards of health can prescribe higher standards through the adoption of an ordinance, which has led to a negative economic impact on those businesses and individuals located in those areas; however, the law (N.J.S.A.58:11-25) does provide for the adoption of such ordinances, and as such, these rules can not contradict that law.

The proposed amendments, repeals and new rules expand the options for the design of onsite sanitary sewage treatment, based on varying site conditions, system location, construction, and installation, as well as expand the requirements for system maintenance and include the protocol for being a State-recognized septic system inspection in New Jersey. The proposed amendments, repeals and new rules, by modernizing standards for these aspects of septic system management, will have positive economic benefits to the residents and businesses in New Jersey as described below.

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. There will be

incremental cost increases associated with these rules, however those increases would be borne by individuals who own and operate onsite systems. Each administrative authority is expected to review its fee schedule to ensure that enough funds are collected through that mechanism to properly recover those expenses. Conversely, allowing these costs to be borne by property taxpayers results in a subsidy to onsite system owners by property taxpayers on sewerage systems, who already pay fees to those sewage authorities. Fees for these programs vary widely in terms of when fees are charged and the dollar amount of those charges. The Department conducted a survey of health departments in 2004 to determine the range of fees collected. With just over 50 percent of the health departments responding, the Department found a significant difference in fees between agencies, which should be commensurate with expenses. For example, the fees charged for a permit to construct a new system ranged from $10.00 to $1,100. Similarly, charges for repairs ranged from $0 to $200.00, with some authorities charging hourly rates to differentiate between the costs associated with simple repairs to those requiring more substantial review by those agencies.

The expansion of the options for design of onsite treatment and disposal, the requirement for maintenance, the incorporation of inspection standards and reporting requirements, and a new concept of non-compliance for systems that are not operated or maintained in accordance with the appropriate permits will impose some negative economic impacts on the administrative authority, however those costs should be passed on to the applicants seeking approval of those systems or through fees to all system owners through the establishment of a septage management district, as is done in some jurisdictions currently, for example Montgomery Township, Somerset County. The administrative authorities are responsible for the permitting of the installation, repair and alteration of systems in their jurisdiction and therefore the aforementioned

requirements will require more resources of the administrative authority. There will be negative economic impacts to the applicant if there is an extra cost for testing and inspection, however not all administrative authorities establish fees in that way. There is an offsetting positive economic impact due to the appropriate evaluation of soils resulting in a properly designed system, eliminating the need for expensive repairs or upgrades at a later date. This can also help reduce costs when it avoids problems at the time of installation, reducing cost overruns in the construction phase.

The administrative authority will also be responsible for determining if a system is non-compliant and is prohibited from approving the design, installation, alteration or repair of a system that violates other laws or regulations. Although these proposed requirements will give even more authority to the administrative authority, they will also require that it expand its activities to include reports of non-compliance other than just malfunctions. This proposed requirement will serve to clarify the administrative authorities' role and responsibilities and will also help to avoid legal fees when it needs to revoke a permit or require service contracts, since it will be able to point specifically to the rule that requires it to do so. However, there will be some other positive economic benefits, such as less paper work, since reporting will be standardized and in an electronic format provided by the Department, which has already been instituted by the Department since 2004. This reporting requirement can in turn lead to more funding mechanisms to the local administrative authorities through the State Revolving Fund. There will be positive economic impacts for system owners because these proposed requirements will ensure that a proposed design does not violate other rules and therefore minimize costs associated with having to re-design a system to be in compliance with other regulatory programs

after an approval is issued by the administrative authority as well as avoiding monetary penalties associated with violating those other rules.

The proposed septic system inspection protocols will enable septic system inspectors to provide conclusions that are more consistent with other inspectors and thereby reduce the disparity in the quality of inspections currently conducted and help to stabilize standardize fees within the industry. While the proposed amendments, repeals and new rules do not mandate use of the inspection standard, the Department has established the protocol that will be the State inspection standard. Home buyers and sellers will derive economic benefits when they choose a septic system inspector who uses the proposed protocol. Home buyers will be able to make better decisions during real property transfers by having sufficient information regarding the current functioning of systems, protecting them from unknowingly purchasing an unsatisfactory system. Home sellers will also be protected from inspectors inappropriately determining that a system operating properly is unsatisfactory. During real property transfers, both home buyers and home sellers will be able to properly negotiate using information gathered from a standardized inspection procedure. While there will be a negative economic impact due to the higher cost of a thorough evaluation, the costs associated with system inspections should reflect the quality of the inspection, and the offsetting positive impacts described above should compensate for the costs associated with a proper evaluation.

There is a proposed new requirement for certain professionals in the onsite wastewater treatment system industry to be appropriately credentialed in order to be authorized to install or perform service on advanced wastewater pretreatment devices in accordance with the proposed new definition of their title. This credential only applies to individuals that choose to work with these products and does not affect those individuals that work only with traditional septic

systems. Professionals that will require a nationally available credential are authorized installers, who perform or directly oversee the installation of systems using advanced wastewater pretreatment or dispersal technologies, and authorized service providers that perform service on these systems. The credential requirement for service providers is either an authorization from the manufacturer, system integrator, or authorized agent, to perform service on those proprietary devices, or an S2 public wastewater treatment system operator license which is readily available to those seeking to obtain it. This credential requirement will assure the holder of a service contract and the manufacturer of the specific technology product that the system and its components are maintained appropriately by a trained professional. The certification for authorized installers of technologies is readily available to qualified individuals in New Jersey. Installers that do not want to be considered authorized to work with these advanced products will not be required to obtain credentials. No credential will be required for individuals that install traditional septic systems. The costs associated with obtaining this certification include $120.00 to take the national certification test and an annual $95.00 recertification fee in addition to the costs associated with taking the required 12 continuing education units (CEUs) every two years. The Department feels this credentialing requirement is reasonable and appropriate to provide for a level of knowledge to be demonstrated for working with these technologies. The credential is also essential to providing the public with a reasonable level of assurance that these authorized individuals have sufficient knowledge and experience to work with these products without creating another State regulatory program to oversee the credentialing of these individuals, but rather, relying on an existing and nationally recognized credentialing program.

Positive economic impacts will affect the firms that develop, manufacture, and market advanced wastewater pretreatment and disposal technologies for use in onsite wastewater

treatment systems. Many manufacturers of these technologies have already begun working with a number of New Jersey based manufacturing companies, such as concrete precasters to make locally produced tanks for their technologies. This results in increased business for the local economy while saving shipping expenses for property owners that don't have to pay additional fees for shipping products from other states. The market for all types of treatment and disposal technologies will be increased by expanding the use of products that are listed by the Department. Fostering the use of these technologies will in turn encourage more innovation and a greater diversity of products. This will lead to greater competition in the long run and ultimately should result in lower prices.

The proposed requirement to upgrade identified malfunctioning cesspools and all privies, pit toilets, outhouses and latrines ensures that the State will eliminate these outdated and antiquated units, which were first restricted in regulation from being constructed in 1976, thus resulting in significantly enhanced water quality, which is a positive economic benefit. In turn this requirement will encourage the purchase of systems that treat sanitary wastewater, again increasing market demand. This requirement to upgrade would be triggered in two situations: 1) when an administrative authority discovers and declares a non-compliant condition; or 2) when one of these units, including operational cesspools, is identified during a real property transfer. The proposed amendments establish exemptions for certain situations in order to avoid financial hardships, such as in the case of conveyances of property between family members or former spouses. The proposed requirement to upgrade these antiquated disposal units will have negative economic impacts on some homeowners due to the costs associated with the proper abandonment and closure of these units and the installation of a new system. However, the long term economic impact of updating onsite wastewater treatment and disposal

will be positive because it will ultimately enhance the value of those properties with adequate sanitary sewage utilities. The proposed requirement to upgrade to a system will have economic benefits for the community, including providing adequate wastewater treatment and disposal and thus reducing possible contamination of water resources such as potable wells and surface waters. The Department estimates that there are about 20,000 homes Statewide with cesspools that would need to be upgraded or replaced when the homes are sold. The number of such homes sold each year is difficult to project; for analytic purposes, the Department prepared separate estimates based on sales of five percent and 10 percent annually until the entire 20,000 homes have been sold. On an unknown portion of those sales, mortgage insurers, lenders, or buyers would require cesspool upgrades or replacements even if the new rule are not adopted; but for purposes of analysis, such non-rule-related requirements are assumed to be zero. The Department estimates that for the average home, a cesspool upgrade or replacement would cost between $13,000 and $30,000, and the useful life of the new or upgraded system would be between 20 and 25 years. Based on these assumptions, the minimum annual impact would be 20,000 homes x 5 percent sold annually x $13,000 cost/home / 25 year useful life = $520,000 Statewide. Based on the same assumptions, the maximum annual impact would be 20,000 homes x 10 percent sold annually x $30,000 cost/home / 20 year useful life = $3.0 million annual cost Statewide. Both the minimum and the maximum costs are insignificant at the Statewide level, and in each case the dollar amount represents the most cost-effective way of achieving the State's water quality objectives for these properties.

The proposed amendments to include the 50 or more realty improvement certification process under the TWA process and itemizing the application requirements will update this program and will have both positive and negative economic impacts. The proposed amendments

includes fees generated through a TWA fee schedule. These fees will be generated based on the estimated costs associated with constructing septic systems in the proposed subdivision. The proposed amendment to review these applications as a TWA will streamline the review process, thereby benefiting the applicant with a 90-day review period, making the timing of the certification process more predictable. The fee will enable the Department to recover costs associated with the administrative and technical review of the application and the issuance of the certification.

One of the improvements to the existing rules is through the proposal of stronger standards for installation and construction as discussed below. These proposed standards will promote better functioning systems and provide long term economic benefits due to increased property values.

The proposed amendments add a requirement to test all septic tanks for water tightness when installed. This proposed requirement is essential to ensure that tanks will not leak, possibly contaminating drinking and ground water, and to ensure that ground water will not compromise the treatment capacity of the tank and the hydraulic capacity of the disposal system. The positive economic impact of this proposed requirement will be the installation of systems that work as designed and protection against common problems that result in premature malfunctioning of the system. These positive economic benefits are expected to outweigh the additional cost of the test during installation.

The proposed amendments to the fill material specification requirements will have a positive impact on consumers by allowing greater competition among producers of fill material as a result of the expanded range of allowable fill materials. In addition, there will likely be an overall reduction in the costs associated with manufacturing the currently required select fill

material since the new specification includes concrete sand, which is manufactured throughout the State for the concrete industry. Costs savings will also be realized with the proposed reduction in area of the zone of disposal by 25 percent when using fill, which should require less materials and less time for installation.

The proposed new requirements for systems at facilities generating large amounts of grease through food preparation will improve the functionality of these systems; however they will result in higher costs to construct, operate and maintain those systems. Some facilities, including, but not limited to restaurants and buildings with cafeterias, which generate large quantities of grease and currently require the installation of a grease trap will be faced with an increased cost through the institution of a performance based active grease removal system. This change is necessary due to the high rate of malfunction experienced by these facilities, mostly based on the strength of the sewage being many times stronger than what is considered typical residential waste. Waste strength is characterized by a number of physical characteristics such as suspended solids and biochemical oxygen demand, which are significantly higher due to the various properties of different types of fats, oils and grease, which are much higher at these facilities when compared to a typical residence. Currently, while the systems may be approved under this chapter, the facilities are technically permitted by rule at N.J.A.C. 7:14A-8.5(b)1. Though it may be more prudent to regulate these discharges through the NJPDES permit program, resources are not available to support such a shift.

Based on US Census Bureau data, the Department estimates that as of 2008 there were about 88,400 establishments in New Jersey that may have produced up to 1,999 gpd of food wastes and other effluent. From EPA data for New Jersey the Department estimates that 10 percent or about 8,840 of those facilities used on-site septic systems for waste handling. Of

those facilities, the Department estimates that eight to 10 percent or about 884 existing facilities have septic systems that fail each year and thus become subject to the proposed rules. In addition, the proposed rules apply only to new facilities producing effluent of less than 2,000 gpd. To estimate the number of such facilities coming on line each year, the Department assumed an annual growth rate equal to the growth rate for the State's population between 2000 and 2010 of about 0.45 percent. Multiplying that rate by the total of 8,840 septic facilities gives an estimate of about 40 new facilities subject to the proposed rule each year, for a total of 884 + 40 = 924 septic systems requiring upgrades each year.

Using cost information provided by engineers experienced in designing pre-treatment systems for restaurants and other food preparation facilities, the Department estimates that for the vast majority of such facilities, the cost to construct and install pre-treatment systems meeting the proposed standards would range from $20,000 for small facilities with easy-to-treat wastewater to $120,000 for facilities with higher flows and harder-to-treat wastewater, with a midpoint for that cost range of $70,000. The Department estimates the useful lives of such systems at between 30 and 40 years; for conservatism the lower end of 30 years will be assumed for all advanced facilities. The Department estimates the annual maintenance cost for these systems at between $300.00 and $2,000, with a midpoint of $1,150.

For traditional septic systems, the Department estimates a construction and installation cost between $20,000 and $60,000, with a midpoint of $40,000. The Department estimates the useful lives of such systems at between five and 10 years, with a midpoint of 7.5 years. The Department estimates the annual maintenance cost for these systems at 50 percent of the maintenance cost for advanced systems. Replacement costs for simple systems were estimated based on these cost and useful life assumptions. Since traditional systems at these types of

establishments fail much more frequently than advanced systems, the Department conservatively assumed the need for one major repair halfway through each simple system's useful life; the repair cost was assumed at 50 percent of the replacement cost. Since such major repairs require time for permit applications, soil testing, and related activities, the actual repair is assumed to take place after a period of time from failure, during which the facility is assumed to use "pump and haul" to dispose of its wastewater.

Based on these and other technical assumptions, the Department estimates that the proposed rules will reduce onsite wastewater treatment costs by about $3,000 or about 35 percent; assuming 900 system upgrades annually under the proposed rules, the Statewide savings would come to about $2.8 million. Although much more difficult to quantify, the benefits of protecting human health from sewage exposure and improved groundwater quality should be added to this. Groundwater quality will be improved for two reasons. First, wastewater from advanced septic systems required under the proposed rules will receive secondary treatment, whereas wastewater from simple systems will receive only primary treatment. Second, the number of septic system failures will be substantially reduced due to the much longer useful lives of the advanced systems. When a septic system fails, damage to the subsurface soil can occur, reducing its water treatment capacity. Human exposure issues are related to direct contamination with sewage that contains pathogens, indirect exposures due to vector attraction and transmittance of diseases as well as odor issues.

In connection with the last point, it should also be noted that when a septic system fails repeatedly, damage to the subsurface soil can result in the area's becoming functionally incapable of septic system use. This means that after several failures, repairs can become significantly more costly because the facility either has to expand the system's disposal area (by

making it wider and/or deeper), dig up and completely replace the degraded soil, or move the system to a new area (if one is available). Some of these options may require the purchase of additional land, which can impose a substantial additional cost to the repair or replacement. The alternative of a permanent pump and haul program is also highly expensive.

The proposed amendments to modify the methods for estimating the volume of sanitary sewage will have both positive and negative economic impacts. The proposed requirement for the State instead of the local administrative authorities to review alternative design volume, such as actual water use data, will have a number of positive economic impacts. First, the workload associated with reviewing this type of data will remove this burden from local authorities. While this transfers associated costs from the local agency to the State, the Department already has a program with trained personnel to deal with these issues more efficiently and a fee structure to support that program. Secondly, if the Department reviews data for alternative design volumes of sanitary sewage under its treatment works approval program and becomes confident of typical daily volume values for an activity, the Department may provide written guidance on treatment volume approval to the administrative authorities, which would allow administrative authorities to approve those identified activities in the future. However, there will be a negative impact to those individuals who will request approval to use alternative design volumes since they will have to pay the minimum $850.00 treatment works approval application fee. The proposed new design criteria for calculating daily volume based on wastewater-generating activities should significantly reduce requests for the use of alternative design volume, especially in those cases where the use of alternative data has been inappropriate.

The proposed new requirement for the Department’s identification of critical areas will have both positive and negative economic impacts. Positive economic impacts will be seen

through increased property values by eliminating existing malfunctioning systems that were improperly located and avoiding future malfunctioning systems for new construction in environmentally sensitive areas. However, there is an offsetting negative economic factor with respect to the cost of upgrading and installing proper sewerage facilities in these critical areas. The precise cost of these sewerage facility upgrades and maintenance costs can vary largely. However, maintenance of older individual subsurface sewage disposal systems is largely ignored by homeowners even though maintenance is vital to the proper operation of all systems, the associated costs of basic system maintenance is rarely considered, therefore the additional cost of maintaining advanced systems is perceived to be greater than it is in actuality. Advanced wastewater pretreatment and disposal technologies are expected to include maintenance and management oversight under the proposed amendments at N.J.A.C. 7:9A-8.3, 9.8 and 10.8. Through these proposed changes, it is possible that the cost to install and operate systems in environmentally sensitive areas may increase; however, the longevity of the properly located systems will increase, property values will increase and protection of the environment will result in greater long term economic benefits by avoiding remedial costs associated with improperly located and malfunctioning systems which affect human health, drinking water supplies and ecotourism in the critical areas.

Environmental Impact

The main purpose of proposing the rules for readoption with amendments, repeals and new rules is to insure that the current rules for onsite wastewater sewage disposal systems continues to require these systems be designed, constructed, operated and maintained to treat and dispose of sanitary sewage while being protective of water quality and human health. Additionally, the Department is proposing amendments to update design requirements to

currently accepted industry standards in order to enhance New Jersey's Standards for the protection against system malfunctions and improve water quality in the State as described below.

The major environmental benefits from the proposal to readopt the rules with amendments, repeals and new rules of the rule will come from the proposed requirement to replace antiquated sanitary sewage disposal units, such as malfunctioning cesspools, outhouses, privies, latrines and pit toilets, and all cesspools discovered during a real property transfer, with a system as defined by the proposed rules. The proposed requirement meets the Department's goal to update onsite wastewater treatment and disposal to be protective of water resources as well as human and environmental health. As an extension of this, proposed new Subchapter 13 allows the Department to establish critical areas for sewerage facilities that would identify areas where many of these systems exist and are negatively impacting the environment. By designating these areas as critical areas, administrative authorities will be required to address problem areas through any number of means including, but not limited to, septic management, limiting new or expanded systems, requiring advanced treatment or other system upgrades. Additionally, the designation of a critical area also allows the Department to assist local authorities in consideration of the requirements of the specific critical area identified, and to help those local authorities coordinate with other regulatory programs within the Department including State based funding options, such as the State Revolving Fund. By assisting local authorities clear regulatory hurdles in these critical areas, the Department can expedite and help fund projects that are beneficial to the environment where current problems exist.

Other proposed amendments that will significantly improve the environment are those that update the design of wastewater treatment systems through the available use of advanced

wastewater pretreatment and disposal technologies. The Department currently authorizes the use of gravel alternative products through general Treatment Works Approvals and is essentially codifying those requirements. Enabling the use of drip dispersal technology for wastewater disposal, which is a highly efficient means of dispersing wastewater throughout the subsurface, provides further options that benefit both the environment and property owners when use of this technology is utilized. Advanced wastewater pretreatment devices approvable through the proposed amendments will produce a higher quality of effluent at sites that incorporate them into the design of their septic systems, thereby reducing pollutant loadings being discharged to the environment. Disposal and dispersal technologies are beneficial at difficult sites with poor percolation and will assist in remedying existing systems that lack proper soil treatment and disposal of wastewater. The use of technology is not new to the State, as treatment technologies are already used in the Pinelands Alternative Design Wastewater Treatment System Pilot Program and are being approved by administrative authorities for alterations to correct malfunctioning systems. These technologies perform as well as, if not better than, standard systems. However, to protect water quality it is essential that these technologies be installed in accordance with the manufacturer's specifications and as tested and certified through NSF International (NSF). The Department is also restricting the use of these technologies to only those properties that can be served by systems that are currently developable under the existing regulation either through local or State construction approvals. Conditions have been proposed throughout the rules to ensure this occurs, such as proposed amendments at N.J.A.C. 7:9A-10.1(b).

The proposed amendments to the grease removal requirements will also improve water quality and reduce potential human exposure to sanitary sewage from malfunctioning systems by

requiring active grease removal as part of systems serving food service establishments. Systems serving food service establishments experience greater rates of malfunction than residential systems due to the loading of higher strength waste. The addition of pretreatment of wastewater can both extend the serviceable life of the system, and reduce the adverse impacts of malfunctioning systems to the environment. Similarly, those commercial activities which are associated with significant amounts of blood in their sewage will no longer be approvable under this chapter pursuant to proposed N.J.A.C. 7:9A-7.3(e). By requiring those discharges, which have unique operational concerns, to be monitored under a NJPDES permit, the Department will maintain operational oversight of those systems to ensure than any impacts to the environment are minimized.

The additional proposed criteria regarding what constitutes a malfunctioning system provides a positive environmental benefit by further identifying the conditions that typically exemplify discharges of inadequately treated sanitary sewage that cause damage to the environment. The proposed inclusion of other non-compliant conditions, such as the improper operation of an approved system, specifically identifies the requirement of administrative authorities to act against system owners that are out of compliance with their original approvals.

The proposed standardization of septic system inspections and reporting requirements will allow the administrative authorities to identify and address non-compliant systems that may be damaging the environment. The proposed amendments to the existing requirement that administrative authorities annually report to the Department, which in turn will be provided to the public on the Department's website, will enable the citizens of the State to have a better understanding of the condition of onsite wastewater management in New Jersey and enable citizens to make more informed decisions on the proper operation and maintenance of their own

systems. It will also improve the ability of the Department to track and collect data from problem areas. This information will allow the Department to improve water quality in those areas. Additionally, the proposed inclusion of a specific inspection protocol will also provide system owners with the information necessary for the proper operation and preventative maintenance of systems, such as the type of system, its location, and the current functional status of the components.

Proposed clarifications to the minimum separation distance requirements for septic systems to watercourses will reinforce the existing policies and will improve the implementation of the existing rule to ensure that systems are adequately located to protect these resources. By making it clear that wetlands are considered watercourses for the purpose of these rules, the Department is continuing to afford wetlands the same level of protection as all other waters of the State. The environmental goals are also furthered through the proposed language establishing that the most restrictive separation distance required by any Federal, State or local requirement takes precedence.

Systems will be more appropriately designed as a result of the proposed amendments to the method of calculating the expected volume of sanitary sewage since calculations will be based on the volume of the wastewater generated from the activities at a facility and not on the name associated with a type of facility. This new calculation will be more logical and will assure that all flow associated with a facility is accounted for when designing a system. This will prevent hydraulic stress on the treatment capabilities of the system and assure that it continues to work as intended. The proposed amendments will also require system designers that want to design a system based on other documented criteria, such as actual water use data, must apply for a treatment works approval to authorize use of the alternative criteria. During the treatment

works approval review process, the Department will provide a thorough technical analysis of data submitted by septic system designers assuring the implementation of the system design standards. The Department will therefore protect human health and the environment by ensuring that systems are sized properly and/or that applicants obtain the appropriate Department permits when necessary.

The proposed deletion of provisions that allow the use of fill in areas subject to flooding in the existing N.J.A.C. 7:9A-4.6(c) will improve implementation of the Standards and have an environmental benefit by reducing the number of inappropriately located septic systems. Flooding events create negative hydraulic impacts on septic systems by sustaining saturated conditions that can lead to a reduced zone of treatment and impede dispersal of the wastewater. Therefore, the proposed amendment will help prevent the nonpoint discharges of sanitary sewage associated with malfunctioning systems into surface waters.

The proposed amendments include specific changes to the requirements for septic tanks, such as water tightness testing, access requirements, changes to the geometry of upright cylindrical tanks and the use of effluent filters that will benefit the environment by assuring the existing requirements for the proper design, installation, and operation of new (or altered) systems are better implemented. These amended requirements insure that systems will last longer; effluent filters will catch the solids that can clog disposal fields preventing pre-mature malfunctions; leaking components of systems will not cause hydraulic malfunctions; and system maintenance and inspections will be made easier with the more specific access requirements. Similarly, the proposed requirement to increase the size of disposal fields serving facilities with garbage disposal systems also ensure that the soils will not get clogged prematurely and will continue to function as intended. The proposed changes are consistent with EPA guidelines.

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., N.J.S.A. 13:lD-1 et seq., and N.J.S.A. 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.

Jobs Impact

The Department believes that the readoption of this chapter provides a positive impact on jobs by maintaining a stabilized system of rules for designing, constructing, operating and maintaining systems throughout the State. The provisions of a Statewide standard for onsite systems makes the approval process more predictable for employers and aids in stabilizing jobs in this sector. The Department also anticipates that the proposed amendments, repeals and new rules will have a positive impact on jobs by incorporating provisions for advanced wastewater pretreatment and disposal technologies is expected to open new markets for technology vendors, septic system designers, authorized installers and appropriately trained maintenance professionals, thus also positively affecting jobs.

The proposed new credential requirement for authorized installers and authorized service providers working with advanced technologies is reasonable and appropriate to provide for a professional level of knowledge for working with these technologies and is also essential to providing the public with a reasonable level of assurance that these authorized individuals have sufficient knowledge and experience to work with these products. Currently, 14 individuals in the State hold advanced level certification for installing technologies. Therefore, the Department anticipates there will be an increased demand for professionals with this credential. The incorporation of this certification requirement will create job opportunities for those installers interested in installing advanced technologies. Similarly the incorporation of provisions for the general use of advanced technologies and the associated requirement for maintaining a service contract will create a higher demand for installers and service providers that have the appropriate credentials.

Agriculture Industry Impact

Pursuant to N.J.S.A. 52:14B-4, the Department has evaluated this rulemaking to determine the nature and extent of the impact of the existing rule and the proposed amendments to the Standards on the agriculture industry. The rules proposed for readoption with amendments, repeals and new rules will not affect the agriculture industry since no agricultural practices are governed by the Realty Improvements Sewerage and Facilities Act (N.J.S.A.58:11-23 et seq.).

Regulatory Flexibility Analysis

In accordance with the New Jersey Regulatory Flexibility Act (Act), N.J.S.A. 52:14B-16 et seq., the Department has reviewed the existing rules and the proposed amendments, repeals and new rules for reporting, record keeping, or other compliance requirements on small businesses. Any person who proposes to construct an individual subsurface sewage disposal

system subject to these Standards must strictly comply with the requirements of this chapter. The rules do not require small businesses, as defined by the New Jersey Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., owning an individual subsurface sewage disposal system, to do any reporting or record keeping or to meet any other compliance requirements beyond the initial system design and construction unless they have incorporated advanced technology. In accordance with N.J.A.C. 7:9A-12.3 all owners of a system incorporating advanced technology are required to maintain a service contract for the advanced technology for the life of the system. If a small business chooses to purchase a system using advanced treatment technology, similar to an individual homeowner that will be required to do so, it will be required to maintain a system in accordance with the proposed requirements, which includes submitting documentation to the administrative authority upon renewal of the service contract.

Proposed amendments to N.J.A.C. 7:9A-12.6 will increase reporting, recordkeeping, credential and other compliance requirements imposed on small businesses that inspect systems as part of real property transfers in accordance with the State protocol, however, use of the protocol is not required by the rules. The Department anticipates that these amendments will not cause significant impacts to those small businesses that already conduct comprehensive inspections and meet the proposed protocol for conducting those inspections. The amendments will have the effect of increasing costs for those small businesses conducting inspections that are not currently meeting the Department's existing inspection guidance, which was first available in July 2003. The new standard for inspecting onsite wastewater treatment systems includes requirements to report the results of the inspections to the administrative authorities. The responsibilities associated with the additional reporting should be minimal as copies are already typically prepared for their client and client representatives. To further minimize these costs, the

Department has specified the ability for inspectors to file these reports electronically if the administrative authority is equipped to do so.

The proposed new requirement for the installation of active grease removal at facilities generating grease may result in additional responsibilities associated with installation and maintenance of systems at these establishments, which may include small businesses. The additional record-keeping, monitoring and reporting requirements may be offset by the reduced potential long-term costs associated with repairing a pre-maturely malfunctioning system.

Proposed amendments will increase reporting, record keeping, credential, and other compliance requirements imposed on small businesses that design, construct, operate or maintain advanced technologies. However, currently, these advanced technologies had limited application in New Jersey to the alteration of malfunctioning systems and were not used widely in the State. The proposed rule amendments will enable general use of these technologies. Therefore the additional requirements on small businesses that design, construct or maintain these systems associated with the proposed amendments will be offset by increasing the market where these products can be used generally.

The rules do not provide any lesser requirements or exemptions for small businesses because the overall purpose of the rules is to protect the public health, safety, and the environment from improper construction of individual subsurface sewage disposal systems. In developing the existing Standards, the Department balanced the need to protect the public health, safety, and the environment against the economic impact of the Standards. The Department determined that to reduce the requirements for small businesses would endanger public health, safety, and the environment.

Smart Growth Impact

Executive Order No.4 (2002) requires State agencies which adopt, amend or repeal any rule adopted pursuant to N.J.S.A. 52:14B-4(a) of the Administrative Procedure Act to describe the impact of the proposed rule on the achievement of smart growth and implementation of the New Jersey State Development and Redevelopment Plan (State Plan).

The rules proposed for readoption with amendments, repeals and new rules promote State Plan General Policy 4, Prevention of Water Pollution, and General Policy 5, Water Quality/Individual and Community On-site Wastewater Treatment Systems by instituting an updated septic management program and improving the implementation of the existing rules. Without the regulatory framework of the existing rules, which establishes the minimum standards to construct individual onsite wastewater treatment systems, there would be no method to ensure these systems are constructed to any minimum criteria that is protective of human health and the environment. The State Plan policy identifies the protection and enhancement of water resources through coordinated planning efforts aimed at reducing sources of pollution and other adverse effects of development, encouraging designs in hazard-free areas that will protect the natural function of stream and wetland systems, and optimizing sustainable resource use. Specifically included in the policy is the provision for well-designed individual on-site wastewater treatment systems that produce treated effluent suitable for recharging ground water. These rules establish those minimum standards to achieve this State Plan policy and the proposed amendments, repeals and new rules enhance those minimum standards to be more protective of human health and the environment.

The rules proposed for readoption with amendments, repeals and new rules advance the Governor's smart growth policies by providing updated septic management including clear technical standards for and guidance to the regulated public. This promotes a more predictable, certain and expeditious review and approval processes. Further, by providing the minimum standards to construct individual systems, the Department is reinforcing the principles of smart growth to allow areas that are designated for development which will rely on individual systems for sewage disposal, to be developed on an environmentally protective basis.

The proposed requirements for replacing onsite wastewater disposal units such as privies, outhouses, latrines and pit toilets and malfunctioning cesspools when identified will require home owners to provide sewerage disposal in a manner that is adequate to protect human health and the environment. The proposed requirement to replace all antiquated onsite wastewater disposal units, including functioning cesspools during or prior to a real property transfer will have a long term positive impact on the environmental protection and human health and will only effect redevelopment, not new construction. These antiquated units do not treat sanitary waste and therefore their replacement is essential to protect human health, to provide adequate sewerage facilities for structures they serve and to protect the integrity of natural systems, these goals of the State Plan.

Housing Affordability Impact

In accordance with N.J.S.A. 52:14B-4, as amended effective July 17, 2008, by P.L. 2008, c. 46, the Department has evaluated the existing rules and the proposed amendments, repeals and new rules for purposes of determining their impact, if any, on the affordability of housing.

The existing rules establish the State minimum criteria for the design and construction of onsite systems in New Jersey. Part of the promise of affordable housing for all New Jerseyans is the provision of adequate housing, which includes utilities and preserving and enhancing areas slated for development or redevelopment. By establishing this minimum standard, the Department provides for the minimum levels of wastewater treatment necessary for the protection of human health and the environment that every citizen in the State is entitled. If housing were allowed to exist in a manner that allowed sanitary sewage to be discharged to the environment in a manner not consistent with these minimum Standards, damage to human health and the environment would negate the viability of that housing.

The rules proposed for readoption with amendments, repeals and new rules that will have positive and potential short-term negative impacts on housing affordability and the number and types of housing units available to the residents of New Jersey.

The proposed system inspection protocol will have positive impacts on the cost of housing when these inspections are required by mortgage lenders or other entities that require these inspections during real property transfers. The proposed inspection protocol ensures that the septic utility of homes is in good working order at the time of inspection and adequate to protect human health and the environment. This proposed inspection protocol will also provide home buyers that opt for these standardized inspections when purchasing housing with information necessary to obtain estimates regarding the costs of replacing or repairing the system. This will allow those home purchasers to plan financially for system maintenance and repair instead of dealing with unexpected, premature failure at a later date.

The proposed requirement for the upgrade of all antiquated sanitary sewage disposal units, such as cesspools, privies, outhouses, latrines and pit toilets, to systems during real

property transfers will increase the average cost of properties that have structures served by these inadequate sanitary sewage disposal units. This proposed new requirement could apply to redevelopment areas that include affordable housing but would not apply to new home construction. There will, however, be long-term benefits, such as minimizing the potential for the need for short-term repairs and providing basic protection of the health of persons and the environment by replacing these substandard units. The Department estimates there are over 20,000 homes served by antiquated units throughout the State. There are, however, funds available to public entities for the building or repairing of systems in rural areas of New Jersey under the USDA's Rural Development Program for wastewater disposal. The majority of the cesspools, privies, outhouses, latrines and pit toilets are in areas considered rural that may qualify for these funds. Preference is given to those areas with low incomes. The Very Low Income Repair and Grants (Section 504) Program through the USDA assists very low income homeowners in rural areas in the repair or improvement of dwellings in order to make such dwellings safe and sanitary and to remove hazards to the health of the occupants, their families or the community. This includes repairs to wastewater disposal systems. The U.S Department of Housing and Urban Development (HUD)'s Community Development Block Grants (CDBG) are also available to cities and counties in New Jersey for the purpose of serving community need. Factors considered include: the extent of poverty, population, housing overcrowding, age of housing and population growth lag in relationship to other metropolitan areas. Although some of the identified funds are not available to home sellers during a real property transfer, funds are available to owners of antiquated sewage disposal units that must be upgraded when identified.

The proposed modernization of individual subsurface sewage disposal system design standards and the new provisions for the use of treatment and disposal technologies for onsite

systems further protects not only water resources of the State for recreation and use, but human health. These proposed updated Standards assure a longer lifetime of systems, becoming more cost-effective in the long term.

While the rules proposed readoption with amendments, repeals and new rules may have minor potential positive and negative impacts on costs associated with housing, as indicated above, the Department believes there is an extreme unlikelihood that the rules proposed for readoption with amendments, repeals and new rules would evoke a change in the average costs associated with housing.

Smart Growth Development Impact

In accordance with N.J.S.A. 52:14B-4, as amended effective July 17, 2008, by P.L. 2008, c. 46, the Department has evaluated the existing rules and the proposed readoption with amendments, repeals and new rules for purposes of determining their impact, if any, on smart growth development.

The rules proposed for readoption with amendments, repeals and new rules will provide more options for the construction of new septic systems serving proposed affordable housing development and realty improvements in State Development and Redevelopment Plan (State Plan) Planning Areas 1 and 2 and designated centers. The proposed incorporation of provisions for the use of technology for advanced wastewater pretreatment and/or disposal provides options at difficult sites proposed for new construction and provides equivalent or better protection of the environment and human health as conventional systems in the current rule. The availability of these alternate technologies may result in the increased ability to construct housing in Planning Areas 1 and 2, as well as affordable housing. The proposed amendments give homebuilders more options in constructing systems which could result in increased affordable housing and new

construction in Planning Areas 1 and 2, as designated under the State Development and Redevelopment Plan. The proposed new provision for enabling the use of technology gives options for homes in areas slated for redevelopment as well.

The proposed new critical areas that may not be suitable for certain types of sewerage facilities and proposed requirements for remediating existing problems will have some negative impacts on development and redevelopment in planning areas and designated centers under the State Plan. The sensitive or "problem" areas that may be identified will have to address those problems for the proposal of new septic systems or the repair or replacement of systems in these areas. However, as is the case with the proposed new requirement for replacing antiquated units for the purpose of protecting human health and the environment, there are proposed new options available with advanced wastewater pretreatment and/or disposal to address sites within problem areas such as regionally, seasonal high water tables.

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

Full text of the rules proposed for repeal may be found in the New Jersey Administrative Code at N.J.A.C. 7:9A-3.3, 3.9, 3.17 and 3.20.

Full text of the proposed amendments and new rules follows (additions indicated in boldface **thus**,; deletions indicated in brackets [thus]):

CHAPTER 9A

STANDARDS FOR INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEMS

SUBCHAPTER 1. GENERAL PROVISIONS

7:9A-1.2 Scope

(a) (No change.)

(b) Except as otherwise provided by N.J.S.A. 58:11-25 **or in N.J.A.C. 7:14A**, the following shall constitute the rules of the New Jersey Department of Environmental Protection **for all individual subsurface sewage disposal systems with an expected volume of sanitary sewage less than or equal to 2,000 gpd** and shall be regarded as **the minimum** uniform standards, in force throughout the State, governing individual subsurface sewage disposal systems. **Different requirements or specifications for individual subsurface sewage disposal systems may be set forth in a treatment works approval, general NJPDES permit or individual NJPDES permit as provided at N.J.A.C. 7:14A.**

7:9A-1.6 General prohibitions

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

(c) The [use] **construction, installation or operation** of a subsurface sewage disposal system [for] **to serve** more than one property is prohibited unless a treatment works approval **and/**or a NJPDES permit has been issued by the Department.

(d) (No change.)

(e) The administrative authority shall not approve the construction or alteration of individual subsurface sewage disposal systems or other means of private sewage disposal where a sanitary sewer line is available within 100 feet of the property to be served. For the purposes of this subsection, an existing sanitary sewer line shall be considered to be available when the following conditions are met:

1. Connection of the facility to the sanitary sewer line may be accomplished without installing a pump station, blasting bedrock, acquiring an easement or right-of-way to cross an

adjoining property, or crossing a watercourse, railway, major highway or other significant obstacle; and

2. The property to be served is located within the designated sewer[age] service area of the sewage treatment plant to which the sanitary sewer line is connected.

(f) (No change.)

(g) The construction**,** [or] installation**, alteration or repair** of cesspools [is]**, privies, outhouses, latrines and/or pit toilets is** prohibited. [Alterations, repairs, and/or corrections to cesspools shall, at a minimum, include the placement of a septic tank sized in conformance with N.J.A.C. 7:9A-8.2 before the point of discharge into the cesspool.]

(h) - (j) (No change.)

(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. The lot(s) and block(s) of the property on which the structure generating the sanitary sewage is located;

2. The lot(s) and block(s) of the property in which the system or system components are located;

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; and

4. A restriction and/or 100-year lease agreement or easement for the property(ies) where the system or portion of the system will be located, which shall provide notice:

i. That the property(ies) contains a system or components of a system which serves a structure on another property; and

ii. Of the associated restrictions on any realty improvements on the property(ies) containing the system or components of the system serving a structure on another property that may infringe upon the minimum separation distances as set forth in N.J.A.C. 7:9A-4.3.

(l) The administrative authority shall not approve the construction, installation, alteration, operation or repair of any system or systems that are included as any part of any improvement to a property, existing, proposed or planned in accordance with any municipal subdivision or site plan approval(s), where the total expected volume of sanitary sewage for the property, based upon completion of all improvements, will exceed 2,000 gpd. This prohibition shall not apply to residential developments where each individual private residence is served by a system that serves only that individual private residential source and both the individual private residential source and the system are located on the same individual lot.

(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.

7:9A-1.8 Limitations

(a) (No change.)

(b) When an individual subsurface sewage disposal system exceeds the limitations in (a) above, a treatment works approval **and a NJPDES permit** issued by the Department will be required[, except under the circumstances specified in N.J.A.C. 7:9A-3.3(f), and a NJPDES permit may also be required].

(c) (No change.)

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.

"Age-restricted unit" means a housing unit designed to meet the needs of, and exclusively for, the residents of an age-restricted segment of the population where the head of the household is a minimum age of either 62 years, or 55 years and meets the provisions of the 42 U.S.C. §§ 3601 et seq., except that due to death, a remaining spouse of less than 55 years of age shall be permitted to continue to reside.

…

"Authorized installer" means an individual who has completed all training requirements of a manufacturer of a product that is listed by the Department in accordance with N.J.A.C. 7:9A-8.3 or 9.8 and/or a listed system integrator of a drip dispersal system designed and installed in accordance with N.J.A.C. 7:9A-10.8, and who installs those advanced wastewater pretreatment devices, products used in lieu of laterals/filter material and/or drip dispersal systems, as applicable.

…

"Authorized service provider" means an individual who maintains an advanced wastewater pretreatment device and/or drip dispersal system in accordance with N.J.A.C. 7:9A-12.3, who monitors the system remotely and who responds appropriately to alarm conditions. This individual must either hold an S2 or greater license pursuant to N.J.A.C. 7:10A; or have completed all training required by a manufacturer of an advanced wastewater pretreatment device that is listed by the Department in accordance with N.J.A.C. 7:9A-8.3; and/or a listed system integrator of a drip dispersal system in accordance with N.J.A.C. 7:9A-10.8.

…

"Commercial food service activity" means any food service activity that includes the preparation of food for sale to any individual who or group that does not work at the facility where the food is prepared. This includes, but is not limited to, supermarkets, restaurants (including fast food), mini markets, bakeries, delis, bodegas and caterers. This does not include food service activities at cafeterias such as those at offices, schools, religious centers or employee eating areas that serve only the individuals that are employed by or attend the facility as part of normal operating functions. This definition shall not be construed to exempt any facility discharging large quantities of grease from the requirements in N.J.A.C. 7:9A-8.1.

…

"Commercial use activities" means those activities that are related to the buying or selling of goods or services, and commonly occur at facilities such as offices, wholesale or retail stores, industrial buildings, factories, and shopping centers.

…

"Component" means any device and/or structure that functions as a part of any system regulated by this chapter.

…

"Congregate living activities" means those activities at structures such as dormitories, motels, nursing/rest homes, group homes, assisted living facilities and boarding houses. These structures typically have one or more amenities and/or activities that service the establishment and not typically an individual unit, such as common bathrooms, kitchens, dining areas and/or laundry facilities.

…

"Disposal field" means a drip disposal bed**,** [or] 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] 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**.

…

"Drip dispersal" means a high pressure, low volume, subsurface method of disposing sanitary sewage in a manner that does not create saturated subsurface conditions below the ground surface and which is preceded by an advanced wastewater pretreatment device. A drip dispersal system includes all associated tanks, pumps, control panels, and piping that is designed, installed, operated and maintained in accordance with the requirements of the system integrator and this chapter.

"Drip emitter" or "Emitter" means an engineered, pressure compensating flow control device which is typically attached to the inside wall of a dripperline over each orifice, that is wastewater rated and discharges wastewater out of the orifice at a constant rate over a range of operating pressures.

"Dripperline" or "drip tubing" means the wastewater rated polyethylene tubing that has uniformly spaced drip emitters along its length, which are attached to the inside wall of the tubing.

...

"Education/child care" means, for the purposes of estimating volumes of sanitary wastewater at facilities using onsite wastewater treatment and disposal systems, any activity associated with educating or providing for activities to individuals under instructor or supervisory care, but provides for no overnight accommodations. These include, but are not limited to all levels of schools, colleges, vocational training centers, day care facilities and day camps.

…

"Existing ground surface" means [the natural surface of the ground at the site of the proposed individual subsurface sewage disposal system after the completion of re-grading in accordance with the approved engineering design] **the level of the ground surface prior to any manmade modification or disturbance**.

…

"Failing system" means a system that is malfunctioning in accordance with N.J.A.C. 7:9A-3.4.

…

"Fill material" **or "fill"** means any **naturally occurring** soil [, rock or other] **or rock based** material **that has not been physically altered,** which **meets or can be sorted to meet a specific grain size requirement and** is placed within an excavation or over the [pre-existing surface of the ground] **existing ground surface**. [The term fill is equivalent in meaning.]

…

"Flushing" means, for the purposes of drip dispersal design and operation, the process by which the entire piping network, including dripperlines, is hydraulically cleansed to prevent emitter clogging by increasing the velocity of water flow through the dripperlines

to scour and transport solid materials that may have accumulated in or on the interior surfaces of the piping in a drip dispersal system.

"Food service activities" means those activities associated with the handling, preparing or serving of food that will result in the generation of wastewater. These activities are typically characterized by the use of heating, cooling, cooking or cleaning equipment including walk-in refrigeration units, stoves, fryers, ovens, warmers, steamers, dishwashers and sinks typically used for food or dish washing.

…

"Fueling position" means the location at any automotive service station that can dispense any type of fuel to one vehicle at any one time. There may be multiple hoses or nozzles located at a single fueling dispenser. However, if only one vehicle can fuel at the dispenser at one time, the dispenser has only one fueling position.

…

"General assembly activities" means those activities which provide areas of fixed or movable seating that may be used for gatherings of individuals. The type of facilities in which these activities could occur include, but are not limited to, religious facilities, all purpose rooms, stadiums, indoor or outdoor theatres, assembly halls, and airports.

…

"Individual subsurface sewage disposal system" or **"ISSDS"** means a [system] **collection of components** for disposal of sanitary sewage into the ground which is designed and constructed **in conformance with this chapter** to treat sanitary sewage in a manner that will retain most of the settleable solids in a septic tank **or may incorporate an advanced wastewater pretreatment device** and [to] discharge**s** [the] liquid effluent **of typical domestic strength** to a

disposal field. **An ISSDS may include advanced wastewater pretreatment.** The term**s "onsite wastewater treatment system" and** "system" [is] **are** equivalent in meaning.

…

"Manufacturer" means the company which holds proprietary rights to a system component or technology.

…

"Minimum drip dose volume" means the volume of water discharged during a dosing event that is necessary to pressurize the entire drip dispersal system and sustain that pressure over a sufficient period to achieve the desired uniformity of discharges between all orifices.

…

"NTU" or "nepholometric turbidity units" is measure of water clarity.

…

"Onsite wastewater treatment system" or "OWTS" means an individual subsurface sewage disposal system.

…

["Pre-existing natural ground surface" means the former level of the ground surface in an area of disturbed ground prior to the disturbance.]

…

"Private access restroom activities" means sanitary sewage generating activities (not associated with shower/ bathing activity) that occur at facilities where the typical user of the establishment including the restroom is present in the establishment for more than one

hour. These include restroom activities at bathhouses, bowling alleys, day camps, religious institutions, day schools, schools and swimming pools.

…

"Public access restroom activities" means sanitary sewage generating activities that occur at establishments where the typical user of the facility is present for one hour or less. These include, but are not limited to, restroom activities at highway rest areas, roadside comfort stations, visitor centers and restaurants (for customers and/or non-customers).

"Real property transfer" means a conveyance of real property from one party to another.

…

"Return manifold" means the pipe to which the distal ends of each lateral in a drip dispersal zone are connected.

…

"Septic system designer" means a New Jersey licensed professional engineer who prepares engineering plans and specifications for the construction or alteration of individual subsurface sewage disposal systems.

"Septic system enforcement officer" means a New Jersey licensed professional engineer, licensed health officer or registered environmental health specialist, acting as the authorized agent for the administrative authority, who approves, permits, certifies or licenses the construction, installation, alteration, repair or operation of individual subsurface sewage disposal systems or who reviews engineering plans; witnesses site evaluation and testing; and inspects construction or makes determinations that might be used for the granting of such approvals, permits, certifications or licenses.

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

"Septic system installer" means a person who constructs, installs or alters individual subsurface sewage disposal systems in accordance with approved engineering plans and specifications or who repairs systems in accordance with N.J.A.C. 7:9A-3.3.

…

"Service contract" means a legal, written agreement between a property owner and an authorized service provider to perform all system startup, maintenance and monitoring requirements identified in this chapter for any system that includes an advanced wastewater pretreatment device, which includes all drip dispersal systems. The agreement must be fully transferable to subsequent owners of the property and renewable.

…

"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.

…

"Single residential occupancy activities" means those activities that are associated with an individual private residence, such as, but not limited to, a single family home, apartment, condominium, townhouse and/ or a duplex home.

…

"Site evaluator" means a New Jersey licensed professional engineer, licensed health officer, registered environmental health specialist or soil scientist who performs site evaluation, soil evaluation or soil testing as prescribed in N.J.A.C. 7:9A-4, 5, and 6.

…

"Structure" means the same as the definition of the same term under the Realty Improvement Sewerage and Facilities Act (1954) at N.J.S.A. 58:11-25a.

…

"Supply manifold" means the pipe to which the proximal ends of the laterals of a drip dispersal zone are connected to supply water to the dripperline during dosing events.

…

"System" is an abbreviated designation for "individual subsurface sewage disposal system" and is equivalent in meaning. **Cesspools, privies, latrines, pit toilets, outhouses, composting or waterless toilets, direct discharges to the ground surface or water courses, and illegally constructed or altered treatment or disposal mechanisms are not systems.**

…

"System integrator" means a company or individual authorized by an original equipment manufacturer of drip tubing that pre-engineers drip dispersal systems, the required advanced wastewater pretreatment and other necessary parts of a drip dispersal system and authorizes installers and service providers for those systems.

…

"Treatment works approval" means [a permit issued by the Department pursuant to N.J.A.C. 7:14A-12.3 for a subsurface sewage disposal system which is beyond the scope or not in strict conformance with the requirements of this chapter] **an approval issued pursuant to N.J.S.A.**

58:10A-6 and N.J.A.C. 7:14A-22, or pursuant to former N.J.S.A. 58:12-3 (repealed by P.L. 1977, c. 74, Section 14 effective July 24, 1977).

…

"Volume of sanitary sewage" means the maximum volume of sanitary sewage which may reasonably be expected to be discharged from a residential, commercial, or institutional facility on any day of operation, determined as prescribed in N.J.A.C. 7:9A-7.4 and expressed **as gallons or, for the purpose of this chapter,** in gallons per day. The volume of sanitary sewage shall not be considered as an average daily flow, but shall incorporate a factor of safety over and above the average daily flow which is adequate to accommodate peak **sanitary** sewage flows or facilities which discharge greater the average volumes of sanitary sewage either occasionally or on a regular basis. The use of water saving devices shall not be used as a basis for reducing estimates of the volume of sanitary sewage.

…

"Water course" means any stream or surface water body, or any ditch or subsurface drain that will permit drainage into a surface water body. This term does not include swales or roadside ditches which convey only direct runoff from storms or snow melting, and storm sewers designed and 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. **Water course includes all wetlands and subsurface drains with an above-ground or surface water outlet.**

"Water service line" means any underground conduit to convey potable or non-potable water.

…

"Waters of the State" means the ocean and its estuaries, all springs, streams**, wetlands** and bodies of surface and ground water, whether natural or artificial, within the boundaries of this State or subject to its jurisdiction.

…

SUBCHAPTER 3. ADMINISTRATION

7:9A-3.2 New system**s** [design approvals]

All aspects of the location, design, construction, installation, operation, [alteration and repair] **and maintenance** of **new** individual subsurface sewage disposal systems shall comply with the requirements of these standards **and any conditions specified in a treatment works approval**.

7:9A-3.3 Existing systems

[(a) The use of systems in existence prior to the effective date of this chapter may be continued without change provided that these systems were located, designed, constructed and installed in conformance with the standards in effect at the time when they were installed and provided that such systems are not malfunctioning.

(b) When an expansion or a change in use of a commercial building or facility served by an existing individual subsurface sewage disposal system is proposed and such expansion or change will result in an increase in the volume of sanitary sewage (determined as prescribed at N.J.A.C. 7:9A-7.4) or a change in the type of wastes discharged (see N.J.A.C. 7:9A-7.3), the administrative authority shall not approve such an expansion or change unless all of the following conditions are satisfied:

1. All aspects of the location, design, construction, installation and operation of the existing system are in conformance with the requirements of this chapter or are altered so that they will be in conformance with the requirements of this chapter;

2. The expansion or change of use of the building or facility served will not exceed the design capacity of the existing system; and

3. It is demonstrated to the satisfaction of the administrative authority that the existing system is not malfunctioning.

(c) When an expansion or a change in use of a residential dwelling served by an existing individual subsurface sewage disposal system is proposed and such an expansion or change will exceed 100 square feet of habitable living space (as defined in the New Jersey Uniform Construction Code, N.J.A.C. 5:23) and such expansion or change will result in an increase in the volume of sanitary sewage (determined as prescribed at N.J.A.C. 7:9A-7.4) or will result in a change in the type of wastes discharged (see N.J.A.C. 7:9A-7.3), the administrative authority shall not approve such an expansion or change unless all of the following conditions are satisfied:

1. All aspects of the location, design, construction, installation and operation of the existing system are in conformance with the requirements of this chapter or are altered so that they will be in conformance with the requirements of this chapter;

2. The expansion or change of use of the dwelling served does not increase the design flow of the dwelling beyond the design capacity of the existing system; and

3. It is demonstrated to the satisfaction of the administrative authority that the existing system is not malfunctioning.

(d) Alterations made to a system for reasons other than a change of use or expansion as described in (b) and (c) above may be approved by the administrative authority provided that both of the following conditions are met:

1. If the scope of the alteration is such that it constitutes the practice of professional engineering according to N.J.S.A. 45:8 and the rules adopted pursuant to same, then such alterations shall be made in conformance with plans and specifications signed and sealed by a licensed professional engineer; and

2. Alterations are made in such a way that those components of the system altered are in conformance with the requirements of this chapter or are closer to being in conformance with this chapter than the original components prior to the alteration.

(e) When alterations are made to correct a malfunctioning system, the alterations shall be made in conformance with (d) above and in a manner that will eliminate the cause of the malfunction and which, with proper operation and maintenance, will not result in future malfunctions.

(f) Alterations to existing malfunctioning subsurface sewage disposal systems, which are regulated under N.J.A.C. 7:14A-7, may be approved by the administrative authority, provided the design flow of the system is less than or equal to 2,000 gpd. A treatment works approval shall be obtained from the Department for the alteration to any existing malfunctioning subsurface sewage disposal system with a design flow greater than 2,000 gpd.

(g) Repairs may be made in the same manner as in the original system, with the exception of cesspools which shall be corrected as prescribed at N.J.A.C. 7:9A-1.6(g), provided that all repairs are approved by the administrative authority.

(h) A person who discharges industrial wastes by means of an existing subsurface sewage disposal system and who has not already applied to the Department for a NJPDES permit shall apply immediately.

(i) A person who discharges sanitary wastes by means of an existing community onsite subsurface disposal system, as defined in N.J.A.C. 7:14A-1.9, who did not apply to the Department for a NJPDES permit by August 21, 1991 is in violation of the Water Pollution Control Act, and shall apply for such a permit immediately.]

(a) Existing systems serving existing structures may continue to be used without change provided that these systems are compliant with the conditions upon which they were approved, are not malfunctioning in accordance with N.J.A.C. 7:9A-3.4, and there is no expansion or change in use of the existing structure that increases the estimated volume of sanitary sewage from the structure (calculated in accordance with N.J.A.C. 7:9-7.4) or changes the type of waste generated (as prescribed in N.J.A.C. 7:9A-7.3).

(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. A system designer has certified that all aspects of the location, design, construction, installation and operation of the existing system are in conformance with the requirements of this chapter or the system will be altered so that it will be in conformance with the requirements of this chapter. If the property cannot support a system in conformance with the requirements of this chapter, the owner shall apply for approval to utilize a holding tank in accordance with N.J.A.C.7:9A-3.12.; or

2. A septic system designer certifies that the existing septic tank and disposal field are not malfunctioning 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. The reconstruction is necessitated by a catastrophic event, such as fire, storm or flood; or

ii. The existing system was approved by the administrative authority after August 18, 1999.

(c) When an existing system is serving an existing structure and is not malfunctioning, and the owner proposes a change to the structure or the use of the structure that will change in any way the estimated volume of sanitary sewage or the type of waste generated, the system may continue to be used if it is demonstrated that the wastewater generated will not exceed the treatment and disposal capability of the existing system by submission of either:

1. A prior approval for the existing system issued by the administrative authority or Department that demonstrates that the existing system is adequate to treat and dispose of the estimated volume and type of sanitary sewage generated by the proposed expanded structure or new use of the existing structure; or

2. A certification by a septic system designer that all components of the existing system are adequate to treat and dispose the estimated volume of sanitary sewage and the type of waste generated.

(d) When an existing system serving an existing structure is in need of repair for any reason, the repair shall be made in a manner that restores and preserves the original approved design, and does not change the original location, size, capacity, type, or number of components of the system.

1. If the existing system is malfunctioning or otherwise non-compliant as described in N.J.A.C. 7:9A-3.4, the repair shall be done in a manner that eliminates the cause of the

malfunction, addresses the non-compliance, and ensures that the system will not, with proper operation and maintenance, result in future non-compliance; and

2. If the disposal field requires repair due to a malfunction in (d)2i and ii the information below shall also be provided to the administrative authority.

i. A certification by a septic system designer prior to the issuance of the approval by the administrative authority that:

(1) The repaired disposal field will be adequate to treat and dispose of the estimated volume of sanitary sewage and the type of waste generated; and

(2) If there is a malfunctioning condition, the repair will correct the malfunctioning condition.

ii. A final as-built drawing signed and sealed by a septic system designer after the repair is completed if any inconsistencies from the original system design are identified during the repair or if original drawings of the system are not currently on file with the administrative authority.

(e) When an existing system associated with an existing structure is to be altered for any reason, including an expansion or change in use of the structure(s) served, alterations shall meet the requirements of a new system in N.J.A.C. 7:9A-3.2 except as indicated below. If the scope of the alteration is such that it constitutes the practice of professional engineering according to N.J.S.A. 45:8-1 et seq. and the rules adopted pursuant thereto, then such alterations shall be made in conformance with plans and specifications signed and sealed by a septic system designer. Any alteration to a disposal field constitutes the practice of professional engineering.

1. If the alteration is not necessitated due to a malfunction, and the owner does not propose to expand or change the use of the associated structure in a manner that will increase the estimated volume of sanitary sewage or type of waste, the administrative authority shall approve the alteration if it is determined to be protective of human health and the environment and will be completed in a manner that brings the system closer to conformance with the requirements of this chapter.

2. If the existing system is proposed to be altered because it is malfunctioning as described in N.J.A.C. 7:9A-3.4 and the owner does not propose to expand or change the use of the associated structure in a manner that will increase the estimated volume of sanitary sewage or type of waste, the alteration shall:

i. Be performed in a manner that will bring the system into conformance with this chapter, eliminate the cause of the malfunction and assure that, with proper operation and maintenance, the system design will not cause future malfunction; and

ii. If it is not possible to bring the system into conformance with this chapter, the system shall be brought as close to conformance with the requirements of this chapter as the administrative authority determines is possible, provided the system as improved results in a discharge that is protective of human health and the environment. If the administrative authority is not able to approve a system under this subparagraph, application shall be made for approval to utilize a holding tank in accordance with N.J.A.C. 7:9A-3.12(b).

7:9A-3.4 [Malfunctioning] **Non-compliant** systems

(a) There are two types of non-compliant systems:

1. Systems that do not perform as approved, or that malfunction, as identified in (b), below; and

2. Systems that are not constructed, operated or maintained in accordance with the requirements of this chapter or as specified in an approval issued by either the Department or the administrative authority.

[(a **(b)** Indications that an individual subsurface sewage disposal system is malfunctioning include but are not limited to the following:

1. – 2. (No change.)

3. Seepage of **sanitary** sewage or effluent into portions of buildings below ground; [or]

4. Back-up of **sanitary** sewage into the building served which is not caused by a physical blockage of the internal plumbing[.]**;**

5. Any leakage from or into septic tanks, connecting pipes, distribution boxes and other components that are not designed to discharge sanitary sewage or effluent; or

6. Any discharge of sanitary sewage without a zone of treatment.

[(b) When an individual subsurface sewage disposal system has been determined to be malfunctioning**,** the owner shall take immediate steps to correct the malfunction**.** When it becomes necessary to repair or replace one or more of the system components or to make alterations to the system, all the following requirements shall be met:

1. The owner or owner's agent shall notify the administrative authority or its authorized agent immediately upon detection of a malfunctioning system. The owner shall obtain prior approval from the administrative authority or its authorized agent for any repairs or alterations made.

2. Alterations made to correct a malfunctioning system shall meet the requirements of N.J.A.C. 7:9A-3.3(c). In cases where the alteration does not involve the practice of engineering as defined by N.J.S.A. 45:8-28(b), the administrative authority or its authorized agent may

approve plans and specifications prepared by a septic system installer rather than a licensed professional engineer.

3. When the malfunction involves continuous discharge of sewage or septic tank effluent onto the surface of the ground or into a watercourse, the use of the system shall cease until repairs or alterations have been completed in a manner which is satisfactory to the administrative authority. In such cases, the administrative authority may permit continued occupation of the building served provided that further surface discharge of sewage or septic tank effluent is prevented by the installation of a holding tank or use of an existing septic system component as a holding tank. The latter may be accomplished by pumping-out the septic tank, dosing tank, seepage pit or other system component at an adequate frequency to prevent overflow.

(c) The administrative authority may, under certain circumstances, approve as a last resort, the permanent use of a holding tank to correct the problem of a malfunctioning system which cannot be repaired or altered in a satisfactory manner. Such approval may be granted by the administrative authority only if prior written approval has been granted by the Department and one of the following criteria is met:

1. The malfunctioning system serves a single family dwelling or other facility falling within the limitations set forth in N.J.A.C. 7:9A-1.8 and the system was constructed prior to the effective date of this chapter; or

2. The malfunctioning system serves a facility which exceeds the limitations set forth in N.J.A.C. 7:9A-1.8 but was constructed prior to March 6, 1981, the effective date of the NJPDES rules (N.J.A.C. 7:14A).

(d) The Department and the administrative authority may approve the permanent use of a holding tank to correct the problem of a malfunctioning system only when all of the following facts have been established to the satisfaction of the administrative authority and the Department:

1. The present malfunctioning system poses a threat or a potential threat to ground or surface water quality or public health or safety or the environment;

2. Due to site conditions, lot configuration, financial circumstances or other constraints, repair, or alteration of the system in a manner that will eliminate the cause of the malfunction is not feasible;

3. Public sewers are by practical means not available;

4. Reduction of disposal field hydraulic loading by means of water-saving plumbing fixtures will not correct the malfunction; and

5. Assurances are given that the holding tank will be emptied and the contents disposed of in a manner which complies with all applicable local, State and Federal ordinances, statutes and regulations. As a means of confirmation, the owner of the system shall install a water meter and shall submit to the administrative authority on a quarterly basis, evidence of dates and quantities of sewage removed, name of person(s) or firm(s) contracted to remove the sewage, the name of the facility(s) to which the sewage is taken, as well as any other evidence or information which is requested by the administrative authority.]

(c) The owner or owner's agent shall immediately notify the administrative authority upon detection of a potential non-compliant system, as described in (a) above.

(d) Whenever the administrative authority has knowledge through report or direct observation of the existence of a potential non-compliant system, it shall investigate and

take all steps necessary to determine whether the system is non-compliant. Only the administrative authority or the Department shall determine that a system is non-compliant.

[(b)] **(e) When** [an individual subsurface sewage disposal] **a system has been determined to be** [malfunctioning] **non-compliant, the owner shall take immediate steps to correct the** [malfunction] **non-compliance. When it becomes necessary to repair or replace one or more of the system components or to make alterations to the system, all** [of] **the following requirements shall be met:**

1. [The owner or owner's agent shall notify the administrative authority or its authorized agent immediately upon detection of a malfunctioning system.] **The owner shall obtain prior approval from the administrative authority or its authorized agent for any repairs or alterations made.**

2. Alterations made to correct a malfunctioning system shall meet the requirements of N.J.A.C. 7:9A-3.3[(c)]**(e)2. In cases where the alteration does not involve the practice of engineering as defined by N.J.S.A. 45:8-28(b), the administrative authority or its authorized agent may approve plans and specifications prepared by a septic system installer rather than a licensed professional engineer.**

3. When the malfunction involves continuous discharge of sewage or septic tank effluent onto the surface of the ground or into a watercourse, the use of the system shall cease until repairs or alterations have been completed in a manner which is satisfactory to the administrative authority. In such cases, the administrative authority may permit continued occupation of the building served provided that further surface discharge of sewage or septic tank effluent is prevented by the installation of a holding tank or use of an existing septic system component as a holding tank. The latter may be accomplished by

pumping-out the septic tank, dosing tank, seepage pit or other system component at an adequate frequency to prevent overflow.

(f) Upon receipt of notification of the existence of a potentially non-compliant system identified during an inspection done in accordance with N.J.A.C. 7:9A-12.6, the administrative authority shall respond to the notification and shall provide its findings to the system owner within 10 business days after the notification. If immediate action is necessary to abate a potential public health or environmental impact, the administrative authority shall respond to the non-compliant system according to its standard operating procedures.

(g) Any food service establishment which generates grease and experiences a malfunction must, at a minimum, upgrade the grease removal components to the requirements of N.J.A.C. 7:9A-8.1.

[(c)] **(h) The administrative authority may, under certain circumstances, approve as a last resort, the permanent use of a holding tank in accordance with the requirements in (i) below to correct the problem of a malfunctioning system which cannot be repaired or altered in a satisfactory manner. Such approval may be granted by the administrative authority only if prior written approval has been granted by the Department and one of the following criteria is met:**

1.-2. (No change.)

[(d)] **(i) The Department and the administrative authority may approve the permanent use of a holding tank to correct the problem of a malfunctioning system only when all of**

the following facts have been established to the satisfaction of the administrative authority and the Department:

1.-2. (No change.)

3. Public sewers are [by practical means] **not available as established at N.J.A.C. 7:9A-1.6(e);**

4.-5. (No change.)

7:9A-3.5 Permit to construct or alter

(a) A person shall not construct, install, **repair** or alter an individual subsurface sewage disposal system until the administrative authority or its authorized agent has issued a permit for such construction, installation, **repair** or alteration.

(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 [licensed professional engineer] **septic system designer** except where N.J.A.C. 7:9A-3.3(d)[1] **or (e)** allows otherwise. The application shall include the following information:

1. Key maps showing the approximate boundaries of the lot on a U.S. Geological Survey (U.S.G.S.) topographic quadrangle or other accurate map and on a U.S.D.A. soil survey map, which is available from the [Soil Conservation Service ("SCS")] **Natural Resource Conservation Service (NRCS)**. A good quality photo-copy reproduction of the U.S.G.S. quadrangle or U.S.D.A. soil survey map may be used for this purpose. The requirement for a soil

survey map does not apply to Essex or Hudson counties, where no modern soil survey is currently available];

2. Full build-out plans of the property if it is part of a common plan of development or sale;

Recodify existing 2-5 as **3-6.** (No change in text.)

[6.]**7**. Maximum expected daily volume of sanitary sewage and method of calculation. **For properties that are part of a common plan of development or sale, the estimated volume of sanitary sewage shall be estimated from the maximum daily activities at the property after completion of the common plan of development or sale**;

[7.]**8**. (No change in text)

[8.]**9**. All data and calculations used in the design of the [sewage] system.

(d) (No change.)

(e) The administrative authority or its authorized agent shall include an expiration date in every permit to construct, install, alter or repair an individual subsurface sewage disposal system. The expiration date shall not exceed five years from the effective date of the permit.

(f) Other than field modifications in accordance with N.J.A.C. 7:9A-3.7, any administrative authority that receives information following the issuance of any permit to install, construct, repair or alter, which contradicts or otherwise may invalidate the issuance of the original permit, shall require the cessation of installation, construction, repair or alteration activities on the system, as applicable, and determine the accuracy of the information. If the administrative authority verifies information that invalidates the conditions on which the original permit was based, the administrative authority shall:

1. Rescind the approved permit for any system on which construction was not completed and certified in accordance with N.J.A.C. 7:9A-3.13 and direct the permittee to amend the application with information that accurately reflects actual site conditions and an appropriate system design; or

2. Direct the permittee to institute remedial measures in situations where system construction has been completed and certified, and to reapply with an application that accurately reflects actual site conditions and an appropriate system design.

7:9A-3.9 Treatment works approval

[(a) A treatment works approval issued by the Department is required for any subsurface sewage disposal system other than a system serving one or more dwelling units, buildings, commercial units or other realty improvements, located on a single property, generating less than or equal to 2,000 gpd of sanitary sewage only, which is designed, constructed and operated in conformance with this chapter.

(b) Whenever a proposed subsurface sewage disposal system meets any of the following criteria, the administrative authority shall direct the applicant to apply to the Department for a treatment works approval.

1. The system will exceed any of the limitations set forth in N.J.A.C. 7:9A-1.8;

2. The design or construction of one or more components of the system will not be in conformance with this chapter;

3. The system utilizes unproven technology or is otherwise experimental in nature, so that adequate functioning of the system will depend upon the installation, operation or maintenance of components or treatment processes not provided for in this chapter;

4. The system is designed to provide wastewater treatment in order to meet effluent discharge limitations or ground and surface water quality standards as prescribed by applicable State or Federal regulations or statutes; or

5. Sewage will not flow by gravity from the realty improvement to the septic tank.

(c) Applications for treatment works approval shall be made on forms available from the Department and shall be accompanied by the required application fee. Application forms and instructions regarding administrative and technical submission requirements may be obtained by contacting the Department at the following address:

Department of Environmental Protection

Division of Water Quality

Bureau of Nonpoint Pollution Control

PO Box 029

Trenton, N.J. 08625]

(a) A treatment works approval issued by the Department pursuant to this chapter is required for:

1. Any project which is required to obtain a sewerage facilities certification from the Department pursuant to N.J.S.A. 58:11-25.1;

2. Any design of a new or expanded individual subsurface sewage disposal system which will not conform with one or more requirements of this chapter;

3. Any design that incorporates an experimental system or component pursuant to N.J.A.C. 7:9A-3.11;

4. Any design that incorporates wastewater treatment in order to meet effluent discharge limitations or ground and/or surface water quality standards as prescribed by applicable State or Federal regulations or statutes; or

5. Any design in which sanitary sewage will not flow by gravity from the realty improvement to the septic tank.

(b) A treatment works approval required for the certification of sewerage facilities pursuant to (a)1 above shall follow the requirements in N.J.A.C. 7:9A-3.18.

(c) Upon determining that a proposed design requires a treatment works approval for a deviation from this chapter, the administrative authority shall direct the applicant to apply to the Department for a treatment works approval.

(d) The administrative authority shall endorse by signing treatment works approval applications to certify that the proposed design otherwise meets the standards of this chapter and local requirements, except for the aspect(s) for which the treatment works approval is being sought.

(e) Applications for treatment works approvals shall be made on forms available from the Department and shall be accompanied by the required application fee, as set forth in N.J.A.C. 7:14A-22.25. Application forms and instructions regarding administrative and technical submission requirements, which may be established by the Department in a technical manual prepared in accordance with N.J.S.A. 13:1D-111, may be obtained from the Department's website at www.state.nj.us/dep/ or by contacting the Department at the following address:

Department of Environmental Protection

401-02B

Division of Water Quality

Bureau of Nonpoint Pollution Control

Post Office Box 420

Trenton, N.J. 08625-0420

(f) Each application for a treatment works approval shall include:

1. Proposed system designs;

2. Endorsement by the administrative authority specified at (d) above; and

3. Supporting documentation that proves that the proposed design will protect surface and ground water quality to at least the same degree as the system requirements in this chapter.

(g) In reviewing a treatment works approval application, the Department will determine whether to grant an approval based upon the following criteria:

1. Protection of public health and safety, and the environment;

2. Protection of water quality;

3. Appropriate assurance of adequate operation, maintenance and management of the system;

4. System design and expected performance;

5. Structural stability of the system and any adjacent improvements; and

6. Impacts to adjacent properties.

(h) The Department shall not issue a treatment works approval for the construction of any system that would create a waiver from an administrative authority ordinance or a Federal, State, county or local law, rule or regulation other than this chapter.

(i) Upon the issuance of a treatment works approval by the Department pursuant to this chapter, the administrative authority may issue final construction approvals. Final construction 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) Individual subsurface sewage disposal systems which serve single family dwelling units and which are located, designed, constructed, installed, altered, repaired and operated in conformance with the requirements set forth in these standards are exempt from NJPDES permit requirements in accordance with N.J.A.C. 7:14A-[8.5(b)1]**7.4(a)1 and 8.1(b)2ii**.

(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 [authorized by rule] **deemed to have an 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-3.12 Holding tanks

(a) The administrative authority may approve the use of a **temporary sanitary** sewage holding tank in lieu of an individual subsurface sewage disposal system, as a temporary means of waste disposal, for a period not to exceed 180 days, where alteration or repair of an existing

system is being implemented as approved by the administrative authority. **An existing septic tank or a portable holding tank may be used as a temporary sanitary sewage holding tank.**

(b) The administrative authority may approve permanent use of a holding tank in the case of a malfunctioning system, subject to approval by the Department, as allowed in N.J.A.C. 7:9A-3.4[(c)]**(h)**.

(c) Where an existing cesspool, privy, outhouse, latrine or pit toilet is required to be abandoned pursuant to N.J.A.C. 7:9A-3.16, the administrative authority may approve the permanent use of a holding tank if:

1. The property is unable to support a system; and

2. The holding tank is approved under a treatment works approval issued by the Department pursuant to N.J.A.C. 7:14A.

7:9A- 3.14 Notification of proper operation and maintenance practices

(a)-(c) (No change.)

(d) The written notification may be developed by the administrative authority, or the administrative authority may distribute copies of [an operation and maintenance manual] **relevant guidance material and/or technical manuals for onsite wastewater treatment systems subject to this chapter** made available by the Department.

7:9A-3.15 Records

(a) The administrative authority or its authorized agent shall maintain records and shall keep on file copies of the following documents:

1. - 5. (No change.)

6. Inspection reports, plans and specifications for repair or alteration of malfunctioning individual subsurface sewage disposal systems or components of malfunctioning systems.

Information about all verified non-compliant malfunctioning systems shall be recorded in a format provided by the Department; and

7. All records of septic system inspections submitted in accordance with the requirements of N.J.A.C. 7:9A-12.6.

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

(d) The administrative authority shall submit electronically, in a format or manner compatible with the Department's electronic reporting system, an annual report to the Department, by February 1 of every year. The report shall include:

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.

7:9A-3.16 [(Reserved)] **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 abandoned and a conforming system installed except:

1. If it is not possible to bring the system into conformance with this chapter, the system shall be brought as close to conformance with the requirements of this chapter as the

administrative authority determines is possible, provided the system as improved results in a discharge that is protective of human health and the environment; or

2. If the administrative authority is not able to approve a system under (a)1 above, application shall be made for approval to utilize a holding tank in accordance with N.J.A.C. 7:9A-3.12(c).

(b) 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) A cesspool that is not malfunctioning may continue to serve the structure after a real property transfer only in the following circumstances:

1. A conveyance for a consideration of less than $100.00;

2. A conveyance by or to the United States of America, the State of New Jersey, or any instrumentality, agency or subdivision thereof;

3. A conveyance encumbering realty, or providing for the modification, release or discharge of a debt, obligation or encumbrance, or the foreclosure of a mortgage or lien, or sheriff and execution sales;

4. A deed which confirms or corrects a deed previously recorded;

5. A sale for delinquent taxes or assessments and the foreclosure of same;

6. Judicial proceedings affecting interests in real estate, and documents filed in connection thereto;

7. A conveyance by a receiver, trustee in bankruptcy or liquidation, or assignee for the benefit of creditors;

8. A deed eligible to be recorded as an "ancient deed" pursuant to N.J.S.A. 46:16-7;

9. A deed or map that memorializes subdivisions of land, or which creates or affects easements or restrictions or other burdens upon title;

10. A conveyance between family members or former spouses;

11. Execution of a lease or license;

12. In specific performance of final judgment;

13. A deed releasing a right of reversion;

14. A deed by a executor or administrator of a decedent to a devisee or heir to effect distribution of the decedent's property in accordance with the provisions of the decedent's will or the intestacy laws of New Jersey, or the passage of title by intestacy or descent; or

15. A deed to effectuate a boundary line agreement.

(d) A person claiming to qualify for an exemption under (c) above shall document the exemption that applies by providing to the administrative authority applicable State of New Jersey Affidavit of Consideration of Use forms available through the New Jersey Department of Treasury and all supporting documentation.

7:9A-3.17 **System professionals**

[(a) The Department will establish a voluntary registration program for individuals involved in subsurface sewage disposal system site evaluation, design, construction, inspection and regulation. The purpose of the registration will be to provide a means for the Department to disseminate technical information and training to professional engineers, health officers, registered environmental health specialists, soil scientists, contractors, septic tank pumpers and other individuals involved in implementation of these standards.

(b) Individuals wishing to be registered shall contact the Department in writing and indicate the categories for which registration is sought. Registration categories shall be as follows:

1. The “septic system enforcement officer” category includes licensed professional engineers, licensed health officers or registered environmental health specialists, acting as the authorized agent for the administrative authority, who approve, permit, certify or license the construction, installation, alteration, repair or operation of individual subsurface sewage disposal systems or who review engineering plans, witness site evaluation and testing, inspect construction or make any determinations relied upon for the granting of such approvals, permits, certifications or licenses.

2. The “site evaluator” category includes licensed professional engineers, licensed health officers, registered environmental health specialists or soil scientists who perform site evaluation, soil evaluation or soil testing as prescribed in N.J.A.C. 7:9A-4, 5, and 6.

3. The “septic system designer” category includes licensed professional engineers who prepare engineering plans and specifications for the construction or alteration of individual subsurface sewage disposal systems.

4. The “septic system installer” category includes persons who construct, install or alter individual subsurface sewage disposal systems in accordance with approved engineering plans and specifications or who repair systems as allowed by N.J.A.C. 7:9A-3.3(d).

5. The "septic system inspector" category includes solid waste haulers registered with the Department in accordance with N.J.A.C. 7:26-3, licensed professional engineers, licensed health officers or licensed sanitarians who perform inspections of individual subsurface sewage disposal systems as required in N.J.A.C. 7:9A-12.2]

(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, 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) An authorized service provider shall, upon request, provide the Department or the administrative authority with either:

1. Written evidence from manufacturers and/or system integrators certifying that the service provider is sufficiently knowledgeable to provide maintenance services on the proprietary technologies in accordance with all manufacturer specifications and this section pursuant to N.J.A.C.7:9A-8.3 and 10.8, as applicable; or

2. An S2 or higher public wastewater treatment system operator license from the Department issued pursuant to N.J.A.C. 7:10A.

(c) An authorized service provider who holds an S2 or higher public wastewater treatment system license but is not authorized by the manufacturer and/or system integrator, as applicable, shall meet all applicable requirements of N.J.A.C. 7:10A when performing maintenance on any advanced wastewater pretreatment unit or drip dispersal system, in addition to all applicable requirements of this chapter.

7:9A-3.18 [Additional requirements] **Requirements** for certification of sewerage facilities serving subdivisions involving **50 or** more [than 10] realty improvements

[(a) Applications for certification by the administrative authority, pursuant to N.J.S.A. 58:11-25, of sewerage facilities serving subdivisions, regardless of the number of realty improvements involved, shall contain the basic information required in N.J.A.C. 7:9A-3.5(c) for each individual

realty improvement contained in the subdivision. Where more than 10 realty improvements are involved, additional information is required as set forth in (c) below.]

(a) Pursuant to N.J.S.A. 58:11-25.1, no subdivision approval shall be granted by any municipal or other authority in the State to cover 50 or more realty improvements, or less than 50 where the subdivision extends into an adjoining municipality or municipalities and will, in the aggregate, cover 50 or more realty improvements, until the Department has certified that the proposed water supply and sewerage facilities for realty improvements comply with applicable State standards. An application for Department certification of sewerage facilities for 50 or more realty improvements shall be directed to the Department by the municipal authority, reviewed by the Department as part of an application for a treatment works approval issued pursuant to N.J.A.C. 7:9A-3.9 and shall be processed in accordance with N.J.A.C. 7:9A-3.9 and this section. The 50 or more realty improvements treatment works approval application for the proposed sewerage facilities shall contain all information specified in N.J.A.C. 7:9A-3.5(b) and this section, and shall be reviewed for compliance with the Water Pollution Control Act N.J.S.A. 58:10A-1 et seq. and the applicable Ground Water Quality Standards N.J.A.C. 7:9C.

[(b) Where 50 or more realty improvements are involved, two separate certifications are required. The first of these is a water quality standards certification issued by the Department pursuant to N.J.S.A. 58:11-25.1, prior to planning board approval, as prescribed in (d) below. The second of these is a design and construction certification, issued by the administrative authority pursuant to N.J.S.A. 58:11-25, prior to issuance of building permits and reviewed by the Department and the administrative authority simultaneously, as prescribed in (f) below.]

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

1. A completed Treatment Works Approval Application (TWA-1) form;

2. Engineering plans including Plot Plan, Final Grading and Drainage Plan, Topographic Plan, and Test Pit/Septic Location Plan in accordance with (c) below;

3. A copy of the preliminary subdivision approval, or other written documentation, signed by the municipal or other authority, stating that the proposed project plan in the 50 or More Realty Improvement Certification Application, as submitted to the Department, will comply with local zoning, planning and environmental ordinances and, if applicable, all local master plan requirements;

4. 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 requirements of the Pinelands Comprehensive Management Plan N.J.A.C. 7:50;

5. A certification from the applicant or applicant's agent stating that the information furnished in the application is true, accurate and complete and that it is understood that any falsification or omission of data or information is a violation of the Water Pollution Control Act N.J.S.A. 58:10A-1 et seq, and is subject to penalties as prescribed at N.J.A.C. 7:14-8;

6. Copies of return receipts that demonstrate the local planning board, environmental commission, town clerk and administrative authority have received notification of the submittal of the application for certification; and

7. The results of application of a nitrate dilution model to the proposed development in accordance with the Technical Manual for 50 or More Realty Improvement Certification

(which may be obtained from at the address specified at N.J.A.C. 7:9A-3.9(e)) or alternatively for lands within the Pinelands, a dilution model as approved by the Pinelands Commission.

(c) [For certifications pursuant to N.J.S.A. 58:11-25, of sewerage facilities proposed to serve subdivisions consisting of more than 10 realty improvements, the following information is required in addition to the information required by N.J.A.C. 7:9A-3.5(c).] **Applications for 50 or more realty improvement certifications must include the following in addition to the information required by N.J.A.C. 7:9A-3.5(b).** This additional information shall be provided on a general site plan of the subdivision, signed and sealed by a licensed land surveyor:

1.-11. (No change.)

[(d) No subdivision approval shall be granted by any municipal or other authority in the State to cover 50 or more realty improvements, or less than 50 where the subdivision extends into an adjoining municipality or municipalities and will, in the aggregate, cover 50 or more realty improvements, until the Department has certified that the proposed sewerage facilities for realty improvements comply with applicable State standards.]

(d) **After the issuance of a 50 or more realty improvement certification by the Department, the administrative authority shall review each proposed new system for conformance with N.J.A.C. 7:9A-3.2 prior to the commencement of construction of any realty improvement or system.**

(e)-(h) (No change.)

(i) Treatment works approval application forms shall be requested from and complete application packages submitted to the Department at the address specified at N.J.A.C. 7:9A-3.9(e). Fees shall be calculated based upon the formulas at N.J.A.C. 7:14A-22.26,

using the estimated costs associated with all of the proposed systems to be located on the proposed project.

7:9A-3.20 Hearing procedures

[In case any certification is denied by the administrative authority, a hearing shall be held thereon before the administrative authority within 15 days after request therefore is made by the applicant. Upon such hearing, the administrative authority shall affirm, alter or rescind its previous determination and take action accordingly within 15 days after the date of such hearing.]**When any certification has been denied by the administrative authority, the aggrieved applicant may contest the denial by requesting a hearing from the applicable board of health. The hearing shall be held within 15 business days after the request. Once a hearing is held, the board of health shall render a decision to affirm, alter or rescind the contested determination and take action accordingly within an additional 15 business days. If the applicant is dissatisfied with the outcome of the hearing, the applicant may appeal the decision to a court of competent jurisdiction.**

SUBCHAPTER 4. SITE EVALUATION AND SYSTEM LOCATION

7:9A-4.1 General provisions for site evaluation and system location

(a) (No change)

(b) A site plan shall be required as part of each application and shall, as a minimum, provide the information outlined in N.J.A.C. 7:9A-3.5(c)[2]**3**.

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. [7:10-12.12] 7:**9D**. **No permit or waiver issued 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.**

Table 4.3 Minimum Required Separation Distances (feet)

Component	Well or Suction Line	Water Service Line	Water Course(1,12)	Occupied Building	Property Line (15)	Disposal Field	Existing Seepage Pit or Cesspool	In-ground Swimming pool
Building Sewer	25(2)	[5] **1**	-	-	-	-	-	-
…	…	…	…	…	…	…	…	…
D-Box (14)	50(2)	10	25(2,5)	10	5	…	…	10
…	…	…	…	…	…	…	…	…

…

(1) [Includes subsurface drains with an above-ground or surface water outlet.]**This distance may be increased as determined by a local, State or Federal entity having authority for establishing separation distances, including, but not limited to wetlands protection, stream encroachment and riparian corridor.**

(2)–(3) (No change.)

(4) This distance may be decreased by the administrative authority to a minimum of 50 feet only when the well is provided with a water-tight casing to a depth of 50 feet or more, and where the casing is sealed into an impervious stratum which separates the water-bearing stratum from the layer of soil used for **sanitary** sewage disposal. N.J.A.C. [7:10-12.13] 7:**9D** shall govern whenever the well under consideration has been installed after July 13, 1979.

(5)–(13) (No change.)

(14) For the purposes of measuring separation distance requirements, a D-Box shall include all piping and appurtenances associated with the effluent distribution network from the outlet of the septic tank to the disposal area.

(15) This separation distance requirement may be reduced to zero feet in cases where either of the following is provided to the administrative authority prior to obtaining a construction approval for the infringing system or its component:

i. If the property line abuts a roadway or utility easement on the side of the property where the reduction in the separation distance is being sought and there are no subsurface utilities located within the separation distance specified in Table 4.3, a notarized statement from the owner of record of the roadway or utility easement acknowledging that no subsurface utilities will be installed within that area; or

ii. 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 for each affected property indicating that the affected property owner(s) allow for the reduction in the required separation distance, detailing the reduction in the required separation distance and acknowledging that future improvements may be limited on each affected property

based on the reduced separation distance granted due to the need to maintain other setbacks, including but not limited to those for in-ground swimming pools and occupied buildings. 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.

7:9A-4.4 Slope

(a) [The] **No** disposal field or seepage pit shall [not] be located in an area where the slope **of the existing ground surface** is greater than 25 percent.

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

7:9A-4.5 Surface drainage

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

(c) The system shall be designed in a manner that will prevent any increase in stormwater runoff to or ponding on adjoining properties as a result of the installation of the system. This shall include any additional runoff to adjoining properties during the construction of the system, unless a temporary increase in runoff is specifically agreed to in writing by all affected property owners prior to commencement of construction of the system and such an increase is not prohibited by other Federal, State, or local requirements.

7:9A-4.6 Surface flooding

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

[(c) When fill material is proposed to elevate the ground surface above the level which is subject to flooding, the requirements and restrictions of (d) below as well as the requirements and restrictions of N.J.A.C. 7:9A-10.3(b) shall apply.]

[(d)] **(c)** Development within a flood [plain] **hazard** area is subject to the restrictions and requirements of the Flood Hazard Area **Control Act** Rules N.J.A.C. 7:13. N.J.A.C. 7:13 prohibits the construction of an individual subsurface disposal system within the floodway of a [delineated stream or within the encroachment line of a non-delineated stream] **regulated water, as defined at N.J.A.C. 7:13-2.2,** and may require a [stream encroachment] **flood hazard area** permit for the construction of a system within [the flood fringe of a delineated stream or the area between the encroachment lines and the boundary of the 100 year flood plain of a non-delineated stream] a **regulated area, as defined at N.J.A.C. 7:13-2.3**.

[(e)] **(d)** (No change in text.)

7:9A-4.7 Freshwater wetlands

(a)–(b) (No change.)

(c) Evidence that the applicant has complied with applicable State freshwater wetland rules shall consist of any of the following documents:

1. A **valid** "letter of interpretation" issued by the Department, indicating that the proposed development is not located in wetlands, waters or transition areas;

2. A **valid** freshwater wetlands statewide general or individual permit, or a **valid** transition area waiver, issued by the Department for the wetlands or transition area aspects of the proposed development; or

3. (No change in text)

(d) (No change.)

7:9A-4.8 Area reserved for **sanitary** sewage disposal

The area used for sewage disposal shall be selected and maintained so that it is free from encroachments by driveways, accessory buildings, additions to the main building, patios, decks and trees or shrubbery whose roots may cause clogging of any part of the system. The area of sewage disposal shall not be located under driveways, parking lots (paved or otherwise), accessory buildings, additions to main buildings or any other form of encroachment which may adversely affect the functioning of the system or interfere with system maintenance.

7:9A-SUBCHAPTER 5. DETERMINATION OF SOIL SUITABILITY

7:9A-5.4 Criteria for determination of soil suitability classes

(a) (No change.)

(b) The depth to the limiting zone shall be measured from the [existing] ground surface to the top of the limiting zone. In the case of disturbed ground, depth to the limiting zone shall be measured from the [pre-existing natural] **existing** ground surface or the [existing] ground surface, whichever is lowest. Criteria for recognition of the [pre-existing natural] **existing** ground surface are given in N.J.A.C. 7:9A-5.10(c).

(c) As shown in Table 5.4 below, the soil suitability designation consists of a Roman numeral from I to III which designates the severity of the soil limitation, together with a letter symbol which designates the type(s) of limitation. When more than one limiting zone is present, the following practice shall be followed:

1.-2. (No change.)

TABLE 5.4 SOIL SUITABILITY CLASSIFICATION

	Depth<1>,	**Suitability**

Type of Limiting Zone	**Ft.**	**Class**
. . .	. . .	. . .

1 Depth is measured from the existing [natural] ground surface to the top of the limiting zone. In the case of disturbed ground, the depth to the limiting zone shall be measured from the [pre-existing natural] **existing** ground surface, identified as prescribed in N.J.A.C. 7:9A-5.10, or the [existing] ground surface, whichever is lowest.

7:9A-5.6 Excessively coarse horizons and substrata

(a) Criteria for recognition of excessively coarse horizons or substrata are as follows:

1. Soil horizons or substrata which have a [course] **coarse** fragment content greater than 50 percent by volume shall be considered excessively coarse regardless of their measured permeability or percolation rate.

2. Sand textured soil horizons or substrata [which] contain**ing** [less] **no greater** than 50 percent **coarse fragments** by volume**, and no less than 15 percent coarse fragments by volume (20 percent coarse fragments by weight),** shall be considered excessively coarse if they are composed primarily of coarse-very coarse sand (from 0.5 to two millimeters in diameter) and lack detectable amounts (two percent or more) of silt and clay. Soils which lack detectable amounts of silt and clay are soils which are dominantly gritty to the touch, lack

cohesion when moist, lack stickiness when wet and do not stain the fingers when rubbed in the hand.

3. (No change.)

7:9A-5.9 Hydraulic head test

(a) (No change.)

(b) The piezometers shall be developed by pumping or surging. After a period of 24 hours, the water levels in both piezometers shall be accurately measured and recorded. **All piezometer readings shall be taken from the same point in the piezometer. The number of water level readings shall be proposed by the septic system designer to the administrative authority based upon site conditions. Piezometers shall not be installed prior to administrative authority approval of the number of water level readings. Additional readings may be required if variability is observed in the readings or if the administrative authority finds discrepancy in the measurements.**

(c) (e) (No change.)

7:9A-5.10 Disturbed ground

(a)–(b) (No change.)

(c) When evidence is found that the surface of the ground may have been modified by a disturbance such as addition of fill material, removal of soil horizons or regrading, the [pre-existing natural] **existing** ground surface shall be identified based upon the following criteria:

1. When a buried A- or O-horizon is present, the [pre-existing natural] **existing** ground surface shall be taken as the top of the A-horizon or the bottom of the O-horizon.

2. When a buried A- or O-horizon is not present, the level of the [pre-existing natural] **existing** ground surface shall be determined by extrapolation from adjacent areas beyond the

limit of soil disturbance. When this method is relied upon, the nature of the pre-existing topography as well as the nature of the ground disturbance shall be described, using topographic contour maps and profiles where appropriate, to the satisfaction of the administrative authority.

(d) (No change.)

(e) In cases where the surface of the ground has been raised by the addition of fill material or lowered by the removal of pre-existing soil horizons, soil suitability shall be determined based upon the depth to limiting zones measured from the [pre-existing natural] **existing** ground surface determined as prescribed in (c) above, or the [existing] ground surface, whichever is lowest.

(f)–(g) (No change.)

SUBCHAPTER 6. PERMEABILITY TESTING

7:9A-6.1 General provisions for permeability testing

(a) The design permeability is the basis for determining the minimum required area of the disposal field. Tests shall be required at the site of each **proposed** disposal field[, at the level of infiltration,] **in native soil or rock material to demonstrate an adequate zone of disposal as required at N.J.A.C. 7:9A-10.1(e)**. **Tests shall be required in those areas demonstrating an adequate zone of disposal** [, at the level of infiltration,] for determination of the design permeability. [Where a conventional disposal field will be installed, tests shall be conducted at a depth of one to three feet below the ground surface, within the soil horizon in which the bottom of the disposal field will be placed. When a soil replacement, mound, or mounded soil replacement installation is proposed, a percolation test shall be conducted within the fill material after it has been emplaced and compacted, or a tube permeater test shall be conducted using

samples of the fill material which have been compacted to a bulk density equivalent to that achieved in the construction of the disposal field. In lieu of this, the permeability class rating method may be used to determine whether the fill material used meets the requirements of N.J.A.C. 7:9A-10.1(f)4.] **Design permeability tests shall be conducted as follows:**

1. Design permeability tests for conventional disposal fields shall be conducted at the level of infiltration at a depth one to three feet below the ground surface within the soil horizon where the bottom of the disposal field will be placed;

2. Design permeability for all mounded disposal fields or soil replacement disposal fields where native soil will remain above the identified zone of disposal shall be determined from the remaining least permeable native soil material above the identified zone of disposal;

3. Design permeability for all soil replacement disposal fields, including mounded soil replacement systems, using fill material that meets the requirements of N.J.A.C. 7:9A-10.1(f) from the top of the zone of treatment to the top of zone of disposal shall be between six and 20 inches per hour; and

4. The permeability of all fill material shall be confirmed after installation to be greater than six inches per hour at the level of infiltration. A percolation test shall be conducted within the fill material after it has been emplaced and compacted, or a tube permeameter test shall be conducted using samples of the fill material which have been compacted to a bulk density equivalent to that achieved in the construction of the disposal field. An additional test shall be required at the top of each separate type of fill, should the fill material in the zone of treatment differ from the fill material being used in the zone of

disposal, to confirm each type of fill material has been installed with a permeability rate greater than six inches per hour.

(b) The administrative authority may require additional **types of** tests**, or additional tests** at **additional locations or alternate** depths other than the depth of infiltration, when doubt exists regarding the presence or the type of a limiting zone **or the soil conditions present**.

(c)-(j) (No change.)

(k) [All] **A septic system designer shall carry out or directly supervise and certify all** soil testing procedures **and results** relied upon as a basis for the design of an individual subsurface sewage disposal system [shall be carried out by or under the direct supervision of a licensed professional engineer] **and determine the permeability of fill material on site as determined by the tests required in (a) above**.

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

7:9A-6.6 Piezometer tests

(a) (No change.)

(b) The following procedure shall be used for the piezometer test:

1. Step One: Remove any sod, vegetation or leaf litter from the ground surface where the test hole will be excavated. The test hole may be excavated from the [existing] ground surface or from the bottom of a larger excavation or soil profile pit.

2.-7. (No change.)

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

SUBCHAPTER 7. GENERAL DESIGN AND CONSTRUCTION REQUIREMENTS

7:9A-7.1 Design requirements

(a)–(c) (No change.)

(d) The septic system designer shall design the system in a manner that provides ground access on the property for servicing and maintenance of all system components. This shall include clearance for appropriate equipment and/or replacement components to be brought to the existing component locations without the need to remove or alter existing or proposed structures, accessory buildings, swimming pools, retaining structures, patios, decks, trees or other permanent features.

7:9A-7.3 Type 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 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) Each component of the individual subsurface sewage disposal system shall be designed and constructed to adequately treat and dispose of the expected volume of sanitary sewage to be discharged from the premises to be served. The expected volume of sanitary sewage from

[private] **single** residential [sources] **occupancy activities** shall be determined based on the criteria set forth in (b) below. The expected volume of sanitary sewage from [commercial or institutional] establishments **which have activities other than single residential occupancy** shall be determined based on the criteria set forth in (c) below. **The total expected volume is based on a maximum use day and shall be calculated by adding the daily volume of sanitary sewage associated with all activities proposed and planned in accordance with municipal subdivision or site plan approvals.**

(b) The criteria for estimating the volume of sanitary sewage from [private] **single** residential [sources] **occupancy activities** shall be as follows:

1. The daily volume for each bedroom or dwelling unit shall be:

i. Volume, first bedroom……..200 gallons per day ("gal/day");

ii. Volume, each additional bedroom……150 gal/day;

iii. Minimum volume per dwelling unit ……350 gal/day; and

iv. Minimum volume per apartment …….350 gal/day.

2. [The minimum volume] **The administrative authority may approve the reduction of the daily design volume** for a **one-bedroom [**dwelling] **age-restricted** unit [shall be reduced to 200 gallons per day in the case of deed-restricted senior citizen communities] or **one-bedroom** mobile home [parks with] dwelling units less than 500 square feet in size **to 200 gallons per day.**

(c) The volume of sanitary sewage from [commercial or institutional] establishments **which have activities other than single residential occupancy** shall be based upon the type**s of activities that are expected to occur that will generate sanitary sewage,** [and] **the** size of the facility and the maximum expected number of persons that may be served during any single day

of operation. The **total expected** volume shall be estimated **for each activity generating sanitary sewage by multiplying the number of gallons per unit per day by the maximum anticipated number of units as identified in Tables 7.4(a) and Table 7.4(b) below. Those tables identify the appropriate units to be used based upon each activity. Those tables shall be used** as follows:

[1. Depending upon the method of estimation selected from (d) below, multiply the number of gallons per person (user) by the maximum expected number of persons per day, or multiply the number of gallons per facility (unit) per day by the number of facilities (units) present or proposed.

2. Estimate the maximum number of employees which may be present during a single day of operation and add an additional 15 gallons per employee per each additional eight hour shift, except in the case of (d)24, (d)32, (d)38 and (d)40 below.]

1. Identify the primary activity for the facility in Table 7.4(a) below, in consideration of those activities defined at N.J.A.C. 7:9A-2.1, and calculate the primary activity volume. If more than one primary activity is proposed, each primary activity shall be calculated separately and then added together to calculate the total primary activity volume.

2. Identify each additional source of sanitary sewage proposed for the facility. If an activity is specifically excluded by a footnote to the primary activity(ies) identified in (c)1 above, those additional sources do not need to be added to the total volume for those primary activity areas. If those additional sources of sanitary wastewater are not specifically excluded, calculate the volume for each additional source of sanitary wastewater and add it to the total volume; and

3. If a primary activity in Table 7.4(a), below, is not identified, the administrative authority may allow for the applicant to use appropriate additional source(s) of sanitary sewage activities for the proposed facility to determine the total design volume calculation. If there is question regarding the design volume calculation, the administrative authority shall direct the applicant to apply for a treatment works approval pursuant to N.J.A.C. 7:9A-3.9 for the Department to determine the appropriate volume.

(d) The criteria listed **in Tables 7.4(a) and 7.4(b)** below [are minimum standards for average facilities of the categories listed] **reflect the average amount of sanitary sewage expected to be generated by the listed activities and shall be used to calculate the estimated volume of sanitary sewage**. [In cases where a facility does not fall within any of the categories, the administrative authority may approve the use of other documented criteria, such as actual water data for the facility or other similar facilities, provided that the value used for design is at least 50 percent greater than the average daily volume of sewage.**] If an administrative authority determines that a proposed type of activity(ies) is not listed in the tables below or is not appropriately represented by the tables below, the administrative authority shall direct the applicant to obtain a treatment works approval for the total expected volume.**

[Type of Establishment — Method of Estimation (gallon per user or gallon per unit per day)

1.Airport 5 gal/passenger

2.Assembly Hall 3 gal/seat/day

3.Auto Service Station 10 gal/car served

4.Bar 5 gal/patron

5.Bathhouse with shower 25 gal/person

without shower 10 gal/person

6.Beach Club 25 gal/person

7.Beauty parlors and salons 120 gal/day/sink

8.Boarding House, Meals 75 gal/guest(2)

15 gal/non-resident boarder

9.Bowling Alley, no food 125 gal/lane/day

with food, add 5 gal/patron

10.Bus Stop Rest Area 5 gal/passenger

11.Cafeteria 5 gal/customer

12.Camp, Cottage (barracks type) 65 gal/person

13.Camp, Day, no meals 20 gal/person

14.Camp, Resort 100 gal/site/day2

15.Camp, Trailer 100 gal/site/day2

with toilets, add 10 gal/person/day

16.Church, with or without kitchen 3 gal/seat/day

17.Cocktail Lounge 5 gal/customer

18.Coffee Shop 5 gal/customer

19.Comfort Station/Picnic Grounds

with toilets 10 gal/person

with toilets and showers 15 gal/person

20.Cottages 100 gal/person2minimum 350 gal/ dwelling unit/day

21.Country Club 60 gal/member/day

25 gal/non-member

22. Dining Hall 5 gal/customer

23. Dormitory, Bunkhouse 40 gal/bed/day

24. Factory/Industrial Building 15 gal/employee per eight hour shift

    with showers, add 15 gal/employee per eight hour shift

25. Hospital, Medical 250 gal/bed/day

26. Hospital, Mental 150 gal/bed/day

27. Hotels 130gal/room/day

28. Institution, Other than hospital 150 gal/bed/day

29. Laundry, Self-service 50 gal/wash

30. Motel 130 gal/room/day

31. Nursing/Rest Home 150 gal/bed/day

32. Office Buildings 15 gal/employee per eight hour shift or

    0.125 gal/ft^2, whichever is greatest

33. Prison 150 gal/inmate/day

34. Restaurant

    sanitary wastes only 5 gal/patron only

    kitchen waste, add 5 gal/patron

35. Rooming House, no meals 65 gal/bed/day

36. School, Boarding 100 gal/student/day

37. School, Day

    No cafeteria or showers 10 gal/student/day

    Cafeteria only 15 gal/student/day

    Cafeteria and showers 20 gal/student/day

Cafeteria, showers and laboratories 25 gal/student/day

38. Shopping Center 0.125 gal/square ft./day(1)

39. Stadium 3 gal/seat/day

40. Store 0.125 gal/square ft./day(1)

41. Swimming Pool 10 gal/person

42. Theater, Indoor 3 gal/seat/day

43. Theater, Outdoor 10 gal/parking space

44. Visitor Center 5 gal/visitor

1 Volume of sanitary sewage for employees included within method of estimation indicated.

2 If laundry wastes are anticipated, increase the estimated flow by 50 percent.]

(e) When facilities with activities generating sanitary sewage use portable toilets, temporary restrooms or holding tanks on a regular basis, the total design volume from all activities shall be used to determine the total volume for the facility. The total design volume from these facilities shall be calculated as prescribed in (c) above. The use of portable toilets, temporary restrooms or holding tanks for sanitary sewage from activities at any facility shall not be used to reduce the total design volume. The only exception to this requirement is for sanitary sewage volume associated with the use of portable toilets, temporary restrooms or holding tanks during the construction of a realty improvement.

(f) Facilities incorporating commercial food service, golf course, country club, prison, hospital, funeral home, hotel, campgrounds and laboratory related activities shall apply for a treatment works approval to determine total expected volume, if an application proposes flows no greater than 2,000 gallons per day. Hospitals include, but are not limited to, medical or psychiatric institutions with the capacity to accommodate patients overnight.

Table 7.4(a)

Primary Activity	*Daily Volume (gallons)*	*Units*	*Footnotes*
Commercial Use	**15** **0.125**	**Employee or** **Gross Square Footage (whichever results in greater volume)**	**1, 2, 3**
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 **Education/Child care**	**125** **10** **Go to Table 7.4(b)**	**Fueling Position; and** **Vehicle served in service bays** **Maximum number of students (includes teachers and other employees)**	**1, 2, 7** **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. **Total expected volume shall be calculated using a maximum service day therefore, the use of this criterion does not preclude using criteria for every other proposed or existing activity for the facility.**
2. **The volume generated by public or private access restroom facilities is not required in addition to the referenced activity criteria. Design criteria from food service are not required for facilities with employee lunch rooms which limit food preparation to employees preparing their own individual meals.**
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. **Projected flow shall be calculated based upon a design criteria of three gallons per seat (including both fixed and non-fixed seating) during maximum occupancy.**
5. **Estimated volume shall be calculated based on the number of sleeping units or beds, whichever results in a greater number plus any additional volume sanitary sewage generated from employee restrooms, shower, laundry and food preparation activities if present.**
6. **Design criteria for warehouse activities is 15 gallons per day per employee per eight hour shift and is based upon the maximum number of employees working an eight hour shift a day. A design criterion of five gallons per day shall be used for part time employees and delivery personnel. For example, a**

warehouse that operates with three shifts proposes 10 employees on one shift but only five employees for the other two shifts must calculate based upon the maximum use and therefore provide volume for three 10-employee shifts or 450 gallons plus any additional flows for delivery personnel or part time employees that might have access to restrooms plus any additional volumes associated with additional sources of sanitary sewage applicable in Table 7.4(b).

7. **A design criterion of 125 gallons per day per gasoline fueling position and 10 gallons per day per motorized vehicle served in service bays on a maximum use day shall be used for motorized vehicle service activity.**
8. **Additional sources of sanitary sewage shall be included in the cumulative daily volume when applicable.**
9. **The design criteria for showers shall be used when shower facilities are available this includes employee showers at any factory, warehouse, industrial building or other place of business (other than emergency shower facilities) as well as showers for patrons at swimming pools, clubs or schools.**
10. **The number of seats must be calculated using the maximum number of indoor and outdoor table and counter seats that may be available on a maximum use day.**
11. **Public, centralized or commercial laundry activities shall use a design criterion of 550 gallons per day per machine. For any other realty improvement, design criteria for realty improvements that include laundry facilities must increase design volume by 50 percent for each unit containing those facilities.**
12. **The minimum design volume for any system is 350 gallons per day, other than a single system serving a single dwelling unit identified in N.J.A.C. 7:9A-7.4(b). This criterion shall be used when any calculated criteria from this table results in an estimated volume of sanitary sewage less than 350 gallons per day.**

7:9A-7.5 Separate disposal of greywater and blackwater

A greywater system may be approved by the administrative authority provided that all of the requirements of these standards are satisfied and provided that an acceptable means for disposal of the blackwater from the building served is indicated in the system design. When the

blackwater from the building served by a greywater system is to be disposed of into a waterless toilet, a variance from the Uniform Construction Code, Plumbing [sub-code] **subcode**, N.J.A.C. 5:23-[3.5]**3.15**, must be obtained by the applicant prior to approval of the greywater system by the administrative authority and the volume of sanitary sewage to be used in the design of the greywater system shall be determined as prescribed in N.J.A.C. 7:9A-7.4. When the blackwater from the building served by a greywater system is to be disposed of into a separate subsurface sewage disposal system, the blackwater system shall meet all the requirements of this chapter and the volume of sanitary sewage used in the design of both the greywater system and the blackwater system shall be a minimum of 75 percent of the volume of sanitary sewage determined as prescribed in N.J.A.C. 7:9A-7.4.

7:9A-7.6 Type of system

[Each system approved by the administrative authority pursuant to this chapter shall consist of a septic tank which discharges effluent through a gravity flow, gravity dosing or pressure dosing network to a disposal field as hereafter described.] **Administrative authorities shall only approve designs that meet the definition of a system as specified in N.J.A.C. 7:9A-2.1.** Seepage pits shall not be approved for new installations except in the case of a greywater system as provided [by] in N.J.A.C. 7:9A-7.5. Installation of a seepage pit may be approved as an alteration for an existing **noncompliant malfunctioning** system subject to the requirements of N.J.A.C. 7:9A-3.3**(d)**.

SUBCHAPTER 8. PRETREATMENT [UNITS] **COMPONENTS**

7:9A-8.1 Grease [traps] **removal components**

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

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

(i)Active grease removal 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 must specify how the grease removal components are to be installed and maintained to achieve the identified effluent design criteria.

(k) Grease removal components must be equipped with audio and visual alarms to identify when the storage capacity of the system has reached 75 percent. When the storage capacity reaches 75 percent, the operator of the system shall take immediate steps to

maintain effluent criteria by ensuring that grease is removed from the system. Disposal of grease must be in compliance with all local, State and Federal requirements.

(l) Any grease removal components that are not operated and maintained in conformance with the original administrative authority approval or manufacturer's specifications shall be considered non-compliant with N.J.A.C. 7:9A-3.4.

7:9A-8.2 Septic tanks

(a) The use of a septic tank shall be required for all [subsurface wastewater disposal] systems **except as provided at N.J.A.C. 7:9A-8.3**. [Use of an aerobic treatment unit or any other device in lieu of a septic tank shall not be approved by the administrative authority without prior approval by the Department. An aerobic treatment unit may precede the septic tank if the septic tank and all other components of the subsurface wastewater disposal system are sized in strict conformance with this chapter and:

1. For batch processing aerobic treatment units the septic tank precedes in series the aerobic treatment unit; or,

2. For gravity flow aerobic treatment units the septic tank follows in series the aerobic treatment unit.]

(b) (No change.)

(c) When domestic garbage grinder units **or sanitary sewage ejector pumps** are installed or proposed, a multiple compartment septic tank is required and the liquid capacity of the septic tank(s), exclusive of air space, shall be at least 50 percent greater than the minimum capacity required in (b)1 above.

(d)-(h) (No change.)

(i) Septic tanks shall conform to the following specifications:

1.-3. (No change.)

4. [Upright cylindrical tanks shall have a minimum diameter of 52 inches. Horizontal cylindrical tanks shall have a minimum length of 72 inches] **All cylindrical tanks shall have a minimum inside length of 72 inches measured between the inlet side to the outlet side** and a minimum width at the liquid level of 36 inches.

(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.** Outlet connections of [the] **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, [an alternative device such as] a septic solids retainer **or septic effluent filter installed and maintained in accordance with this chapter** may be used [provided that this device bears the seal of the

National Sanitation Foundation (NSF) certifying that the device has been approved by NSF for the specific use proposed and provided that the installation conforms to the manufacturer's recommendations]. Where a septic solids retainer **or septic effluent filter** is used, a gas deflection baffle is not required.

(k) (No change.)

(l) Access openings for septic tanks shall meet the following requirements:

1. (No change.)

2. All manholes [at a minimum] shall be extended to [within six inches of] **and maintained at** finished grade by means of a riser fitted with a removable watertight cover. [Where manholes are extended flush with finished grade, covers] **Covers** shall be bolted or locked to prevent access by children and shall be of cast iron when a concrete riser is used. [When manholes are not extended to finished grade] **Manhole** covers shall be [constructed of precast reinforced concrete, fiberglass, polyethylene or other] **designed using** materials **that will ensure a water tight seal between the cover and the riser at all times** as specified by a [licensed professional engineer] **septic system designer** and approved by the administrative authority. [The location of the manhole shall be marked on the ground surface by means of a] **A** permanent, non-corrosive marker a minimum of [three inches in diameter.] **six (6) square inches in size containing the following information shall be attached to the manhole cover or riser immediately below the cover:**

i. The administrative authority name and permit number under which the system was installed;

ii. The date of installation;

iii. The type of system; and

iv. The total design criteria in gallons per day.

3. An inspection port extending to finished grade shall be provided over each tank or compartment inlet and outlet which is not directly below a manhole except for those outlets where a septic solids retainer **or effluent filter** is used. Inspection ports shall extend to finished grade, shall be constructed of four-inch cast iron or Polyvinyl Chloride (PVC), and shall have a locked or bolted cap. **Outlets where a septic solids retainer or effluent filter is located shall be directly below a manhole or have an inspection port that allows for at grade access to that device to allow for unimpeded maintenance without entering the septic tank.**

4. (No change.)

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

1. Water tightness 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. Tanks made of materials other then concrete shall be tested, after installation, in accordance with the methods described in ASTM C-1227 standards, if applicable, or other hydrostatic or vacuum testing methods approved by the tank manufacturer.

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

4. The use of an onsite potable well for purposes of supplying water for this testing is not recommended.

5. If an onsite potable well is to be used, withdrawal of water from the well shall be at a rate of less than 50 percent of the design yield of the well and in a manner that will avoid damage to the pump or any other part of the well.

[(m)] **(n)** (No change in text.)

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 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. Any advanced wastewater pretreatment device manufacturer that wishes to have their device listed by the Department shall submit a written request and a copy of an NSF Final Report. The written request shall include an acknowledgement by the manufacturer to comply with all applicable requirements of this chapter.

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

3. All advanced wastewater pretreatment devices shall be used in accordance with the provisions of this chapter and all documentation in the NSF Final Report provided to the Department.

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

1. Certify in the application that they are sufficiently knowledgeable of the technology(ies) to design the system;

2. Design systems that include advanced wastewater pretreatment devices in a manner which meets all manufacturer's minimum specifications and/or recommendations;

3. Design all advanced wastewater pretreatment devices so that the raw wastewater cannot be discharged without first being properly treated by the treatment unit as it was designed. The design shall provide that the liquid levels in the tanks or other treatment

vessels shall be monitored by a properly functioning high level alarm and any other monitoring equipment or alarm as recommended by the manufacturer;

4. Utilize the manufacturer's recommendations for sizing of the advanced wastewater pretreatment whenever a discrepancy occurs between the estimated volume of sanitary sewage calculated in accordance with N.J.A.C. 7:9A-7.4 and the manufacturer's recommended sizing of the advanced wastewater pretreatment device. Sizing of all other components of the system shall conform to this chapter.

5. For non-residential systems, obtain a letter from the manufacturer, or the manufacturer's representative, and provide it to the administrative authority, verifying the design's consistency with all manufacturer's minimum specifications and recommendations. The administrative authority may require the septic system designer to obtain a letter from the manufacturer, or the manufacturer's representative, for residential systems and provide it to the administrative authority, verifying the design's consistency with all manufacturer's minimum specifications and recommendations;

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 interface that provides continuous remote monitoring, information management and control of the advanced wastewater pretreatment device; or

ii. Systems that do not have a telemetry control panel shall use an active phone line equipped with an auto dialer to notify the authorized service provider of alarm conditions, including if power to any of the system equipment is disconnected;

7. Design the system so that all processing tanks, discharge tanks and related treatment unit(s) shall maintain the same minimum separation distances as required for septic tanks at N.J.A.C. 7:9A-4.3;

8. Include in the system design only advanced wastewater pretreatment devices that are water tight. 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. Include in the design a septic tank prior to any advanced wastewater pretreatment devices unless otherwise specifically identified in the NSF Standard 40 or 245 certification and the manufacturer's recommendations or specifications. Effluent filters required at N.J.A.C. 7:9A-8.2 may be relocated to another point downstream of the septic tank or may be eliminated provided that this design consideration is specifically identified in the manufacturer's recommendations or specifications;

10. Include within any system that incorporates an advanced wastewater pretreatment device a method of sampling wastewater after the advanced wastewater pretreatment device to monitor effluent quality after final treatment has been achieved. This method of sampling must be achievable at final grade without excavation; and

11. Note in the design all installation requirements in (c) below, and all maintenance and monitoring requirements required by N.J.A.C. 7:9A-12.3.

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

1. An authorized installer shall be physically present at all times during installation of an advanced wastewater pretreatment device and either install or directly oversee the installation of the advanced wastewater pretreatment device.

2. The authorized installer shall ensure that the property owner has been provided with a copy of the service contract and agrees to comply with the requirements therein by obtaining their written acknowledgement via signature prior to the installation of any system that incorporates an advanced wastewater pretreatment device.

3. All advanced wastewater pretreatment devices shall be installed in accordance with directions provided in the advanced wastewater pretreatment device manufacturer's installation manual and the approved system design.

4. The authorized installer shall be in possession of all necessary permits, approvals and licenses before attempting any portion of an installation. All documentation must be located at the installation site for the duration of the installation and made available upon request by the administrative authority or the Department.

5. The water tightness of any tanks specified in the design must be water tight 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) The following requirements are applicable for system start-up of any system containing an advanced wastewater pretreatment device:

1.The authorized service provider shall inspect the system following installation.

i. The authorized service provider shall complete a manufacturer's system start-up checklist; and

ii. The authorized service provider shall provide the completed start-up checklist to the administrative authority.

2.The authorized installer that installed the advanced wastewater pretreatment device shall be present at the time of start-up.

(e) The following requirements are applicable to the administrative authority that approved the installation of an advanced wastewater pretreatment device:

1. The administrative authority shall not approve any system incorporating an advanced wastewater pretreatment device unless all design, installation or maintenance documentation for any part of the proposed system has been received from the septic system designer.

2. All sites where an advanced wastewater pretreatment device has been installed shall be tracked to manage contact information, maintenance activities, and generate reports. The reports shall be submitted to the Department with the annual reports required at N.J.A.C. 7:9A-3.15 and shall provide the following information, at a minimum:

i. The type of advanced wastewater pretreatment devices installed;

ii. The location of each installed advanced wastewater pretreatment device;

iii. The type of use (for example residential or commercial);

iv. The type of disposal area (for example bed, trench, or drip dispersal);

v. The date when the advanced wastewater pretreatment device was installed and started up; and

vi. The date of each inspection/maintenance calls conducted.

3. The administrative authority shall not issue a certificate of compliance for any system incorporating an advanced wastewater pretreatment device unless a copy of a fully executed service contract has been received and the reporting information required in (e)2 above is recorded.

SUBCHAPTER 9. EFFLUENT DISTRIBUTION NETWORKS

7:9A-9.2 Dosing tanks

(a)-(c) (No change.)

(d) All dosing tanks shall meet the following requirements regardless of whether a pump or siphon is used.

1.-7. (No change.)

8. Requirements for backfilling around dosing tanks shall be the same as for septic tanks, as prescribed in N.J.A.C. 7:9A-8.2[(m)]**(n)**.

(e) (No change.)

(f) Dosing may be accomplished by means of a pump when either gravity dosing or pressure dosing is used. Duplicate pumps may be required by the administrative authority. The following requirements shall be met:

1. - 6. (No change.)

7. The operation of the pump shall be controlled by means of automatic switches which are activated by the rising and falling level of effluent in the dosing tank. Such switches shall meet the following requirements:

i.-iii. (No change.)

iv. All electrical **splices, junction boxes,** contacts and relays shall be located outside of the dosing tank and a gas-tight seal shall be provided where electrical conduits enter the tank.

v. All electrical service lines **to or** from the [home or facility to the] pump control panel shall be [protected by] **installed in** electrical conduit.

7:9A-9.3 Connecting pipes and delivery pipes

(a) (No change.)

(b) Delivery pipes for pressure dosing networks shall be constructed of Polyvinyl Chloride (PVC) plastic (ASTM D 2665), schedule 40, SDR-21 or SDR-26; or Acrylonitrile-Butadiene-Styrene (ABS) plastic (ASTM [2661] **D-2661**). Connecting pipes may be constructed of any of the following materials:

1. Plastic meeting the following criteria:

i. (No change.)

ii. ABS (ASTM [2661] **D-2661**).

2.–3. (No change.)

(c)–(f) (No change.)

7:9A-9.4 Distribution boxes

(a) A distribution box shall be required for all gravity flow systems and all gravity dosing systems where the effluent shall be distributed between two or more **separate** distribution laterals [which are not inter-connected]. The following requirements shall be met:

1.–5. (No change.)

7:9A-9.5 Laterals; gravity distribution

(a) [Gravity] **Except as provided by N.J.A.C. 7:9A-9.8, gravity** flow networks and gravity dosing networks may consist of a single distribution lateral, two or more laterals connected by means of elbows or tees, or two or more separate distribution laterals connected independently to a distribution box. Distribution laterals shall meet all the following requirements:

1.–6. (No change.)

(b) (No change.)

7:9A-9.6 Pressure dosing networks

(a) Pipe networks for pressure dosing systems shall consist of two or more distribution laterals connected to a central or end manifold. The following requirements shall be met:

1.-7. (No change.)

8. Pressure dosing networks shall be constructed of PVC plastic (ASTM [D-2662] **D-2665**), schedule 40, SDR-21 or SDR-26, or ABS plastic (ASTM [2661] **D-2661**) pipe.

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. Any manufacturer seeking listing of a product pursuant to this section shall submit a written request to the Department at the address identified at N.J.A.C. 7:9A-3.9(e) identifying that manufacturer. The written request shall include all results documenting structural integrity of the product evaluated in accordance with an American Association of State Highway and Traffic Officials (AASHTO) H-10 load rating (16,000 lbs/axle), incorporated by reference, as amended. AASHTO load rating methods can be obtained at http://transportation.org. The request shall additionally specify a means of installing inspection ports that will allow an inspector or system owner to determine the depth of wastewater within the product. Any other performance based certifications or approvals from other states that have been issued for the product should also be included with the request.

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

3. Manufacturers shall comply with all requirements of this chapter and any requirements of any certification submitted in support of this listing, including the manufacture, design or construction standards for the product used in support of the AASHTO load rating report.

4. If a manufacturer of a product used in lieu of laterals and filter material wishes to allow for an alternative inlet invert elevation of 12 inches above the level of infiltration, required by N.J.A.C. 7:9A-10 for the various types of system designs, an alternative inlet invert may be requested by a manufacturer if it can be demonstrated to the Department that the product will provide an equivalent storage capacity provided by laterals and filter

material in a standard system design. Alternative inlet invert heights will be specified in the list provided by the Department.

(b) Systems that are proposed to include products identified on the Department list developed in accordance with (a) above shall be designed by a septic system designer who is sufficiently knowledgeable of the product and installed by an authorized installer. A copy of the authorized installer's written certification as required in N.J.A.C. 7:9A-3.17 shall be available upon request.

(c) Any system containing these products shall be designed and installed in accordance with all manufacturer's specifications and recommendations and the minimum requirements of this chapter. The septic system designer shall certify on the plans that he or she is sufficiently knowledgeable of the technology to design the system being proposed.

(d) The minimum area of the disposal field shall be calculated in accordance with N.J.A.C. 7:9A-10.2. The product shall be designed in accordance to the manufacturer's recommendations. If the manufacturer recommends a specified spacing between product units, the disposal area does not need to be increased provided the spacing does not exceed six inches. If the soil between the units does not have the capacity to become saturated or spacing of the units exceeds six inches, the minimum disposal area must equal the bottom area of the units only, not including the space between the units.

(e) When pressure dosing is specified, a distribution pipe meeting the requirements of N.J.A.C. 7:9A-9.6 shall be installed according to manufacturer's instructions. Holes in the distribution pipe shall face up at an angle consistent with manufacturer's instructions.

(f) Inspection ports shall be installed in the four corners of the disposal area within the product. When individual rows of the product are not immediately adjoining or are not

interconnected at both ends within four inches of the level of infiltration, inspection ports shall be installed in each end of each row of these products.

(g) Drainage fabric required at N.J.A.C. 7:9A-10.3(e)3 may be omitted for those products where the manufacturer has specified in the design standards that drainage fabric is not required and that the product is designed to prevent soil material above the product from migrating into the product and to the level of infiltration.

(h) When a disposal bed with a distribution box is proposed, in lieu of N.J.A.C. 7:9A-9.4(a)2i the distribution box shall be installed within two (2) feet of the disposal bed using the criteria specified in N.J.A.C. 7:9A-9.4(a)2ii.

SUBCHAPTER 10. DISPOSAL FIELDS

7:9A-10.1 General design requirements for disposal fields

(a) (No change.)

(b) **No disposal field shall be installed in areas where the depth to any limiting zone below the existing ground surface is less than 24 inches.** The disposal field installation shall be such that the disposal field is underlain by a suitable zone of treatment as prescribed in (d) below and a suitable zone of disposal as prescribed in (e) below. Acceptable options for disposal field installation are as follows:

1.-3. (No change.)

4. Mounded installation: Fill material shall be placed above the **existing** ground surface; the disposal field shall be installed within the fill; and the level of infiltration shall be one to four feet

above the existing ground surface (measured on the upslope side of the disposal bed or each individual disposal trench), as shown in Figure 20 of Appendix A.

5. Mounded soil replacement installation: An excavation shall be made below the **existing** ground surface; fill material shall be placed within this excavation and mounded up above the existing ground surface; the disposal field shall be installed within the fill; and the level of infiltration shall be at existing ground surface **or up** to four feet above the existing ground surface (measured on the upslope side of the disposal bed or each individual disposal trench), as shown in Figure 21 of Appendix A.

(c) The type of disposal field installation permitted shall be determined based upon the soil suitability class as outlined in Table 10.1 below.

TABLE 10.1

TYPE OF DISPOSAL FIELD INSTALLATION

. . .

Type of Limiting Zone	Depth,<2> ft.	Suitability Class	Type of Installation Permitted<3>
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. . .

1 (No change.)

2 Depth is measured from the [existing] ground surface to the top of the limiting zone. In the case of disturbed ground, the depth to the limiting zone shall be measured from the [pre-existing

natural] **existing** ground surface, identified as prescribed in N.J.A.C. 7:9A-5.10(c), or the [existing] ground surface, whichever is lowest.

3–4 (No change.)

(d) A zone of treatment (see Figures 22, 23 and 24 in Appendix A), a minimum of four feet in thickness, shall be present below the disposal field and shall meet all of the following requirements:

1.-4. (No change.)

5. The thickness of the zone of treatment may be reduced, at the administrative authority's discretion, to a minimum of 18 inches in thickness when the system design incorporates an advanced wastewater pretreatment device in accordance with N.J.A.C. 7:9A-8.3.

(e) A zone of disposal (see figures 22, 23 and 24 in Appendix A), a minimum of four feet in thickness, shall be present below the zone of treatment and shall meet all of the following requirements:

1.–2. (No change.)

3. When the permeability of the zone of disposal has been determined to be two inches per hour or faster, as prescribed in N.J.A.C. 7:9A-6, or the basin flooding test drains in less than three hours on each and every filling, the minimum required field bottom area of the zone of disposal may be reduced by 25 percent, except in cases where a perched zone of saturation exists and interceptor trenches are not proposed. This determination shall not be made using the percolation test. The permeability test shall be conducted within the zone of disposal at the location of the proposed disposal field. In no case shall the reduction result in drainage from the zone of treatment being inhibited. Accordingly, the

unexcavated area of the zone of disposal shall be sloped to promote drainage to the excavated area. The minimum field bottom area of the zone of treatment shall not be reduced.

Recodify existing 3. and 4. as **4. and 5** (No change in text.)

(f) When fill material is used in disposal field construction, the following requirements shall be met:

1.-3. (No change.)

4. When fill material is utilized within the zone of treatment, the fill shall meet the following requirements:

i. Coarse fragment content **(greater than a No. 8 sieve)** less than 15 percent by volume or less than [25] **20** percent by weight;

ii. Textural analysis (composition, by weight, of size fraction passing [the two millimeter] **the particular** sieve **as stated below in this subparagraph**) [from 85 to 95 percent sand, from five to 15 percent silt plus clay, minimum two percent clay;] **between 80 and 100 percent must pass a No. 8 sieve (2.36 mm); between 50 and 85 percent must pass a No. 16 sieve (1.18 mm); between 25 and 60 percent must pass a No. 30 sieve (0.6 mm); between 10 and 30 percent must pass a No. 50 sieve (0.3 mm); and between two and 10 percent must pass a No. 100 sieve (0.15 mm); and**

iii. Permeability [from two to 20 inches per hour; or percolation rate from three to 30 minutes per inch.] **for this material is established in this chapter at the range of six to 20 inches per hour for design purposes.**

5. When fill material is placed within the zone of disposal, the fill material shall meet the **specifications in N.J.A.C. 7:9A-10.1(f)4 above or the** following requirements:

i. Coarse fragment content less than 15 percent by volume or less than 25 percent by weight; and

Recodify existing i. and ii. as **ii. and iii.** (No change in text.)

6. Use of the term or specification bank run, which implies a material of alluvial deposition which is high in coarse fragment content, in system designs shall be prohibited unless a septic system designer includes a specification for that material consistent with (f)4 or 5 above, as applicable.

(g) The following requirements shall be met when installing a disposal field in sloping ground:

1. 2. (No change.)

3. When the slope of the **existing ground surface** is [greater than] **between** 10 **and 25** percent, trenches shall be used rather than beds;

4.-5. (No change.)

(h) When a conventional or soil replacement installation is proposed, the bottom of the disposal field shall be at a depth [of] from one to three feet below the existing ground surface. When a mound or mounded soil replacement installation is proposed, the level of infiltration shall be at an elevation no higher than four feet above the existing ground surface, measured on the upslope side of the disposal bed or each individual disposal trench. In no case shall the level of infiltration be greater than three feet below the finished grade.

7:9A-10.2 Disposal field sizing requirements

(a) The minimum required disposal field size or the maximum allowable hydraulic loading rate shall be determined, using sizing criteria as prescribed below, based upon the volume of

sanitary sewage, determined as prescribed in N.J.A.C. 7:9A -7.4, and the results of permeability tests or percolation tests performed as prescribed in N.J.A.C. 7:9A-6.

1. (No change.)

TABLE 10.2(a)

(No change.)

2. Systems that incorporate an advanced wastewater pretreatment device may, at the administrative authority's discretion, alternatively use Table 10.2(d) for Table 10.2(b) below and Table 10.2(e) below for (d) below or Table 10.2(c) below, as applicable, for the criteria used to calculate the size of a disposal field.

(b)-(d) (No change.)

TABLE 10.2(b) MINIMUM REQUIRED DISPOSAL TRENCH LENGTH PER GALLON OF DAILY **SANITARY** SEWAGE VOLUME, L/Q (ft/gal per day)

Permeability (in/hr)	**Percolation Rate (min/in)**	**Trench Width (ft):**	**L/Q [1] (ft/gal per day) 1.5**	**2.0**	**2.5**	**3.0**
>6-20	<3-15		0.65	0.54	0.46	0.40
>2-6	<[16]15-30		0.83	0.69	0.59	0.52
>0.6-2	<[31]30-45		1.03	0.85	0.73	0.64
>0.2-0.6	<[46]45-60		1.18	0.98	0.84	0.74

TABLE 10.2 (c) MINIMUM REQUIRED DISPOSAL FIELD BOTTOM AREA **OF ZONE OF TREATMENT** PER GALLON OF DAILY **SANITARY** SEWAGE VOLUME A/Q[1] (ft^2/gal per day))

Permeability (in/hr)	**Percolation Rate (min/in)**	**A/Q [1] (ft^2/gal per day)**
>6-20	<3-15	1.61
>2-6	<[16]15-30	2.08
>0.6-2	<[31]30-45	2.56
>0.2-0.6	<[46]45-60	2.94

TABLE **10.2(d) MINIMUM REQUIRED DISPOSAL TRENCH LENGTH PER GALLON OF DAILY SANITARY SEWAGE VOLUME, L/Q[1] (ft/gal per day) WITH AN ADVANCED WASTEWATER PRETREATMENT DEVICE**

Permeability	**Percolation Rate**		**Adjusted L/Q[1] (ft/gal per day)**			
		Trench Width (ft)	**1.5**	**2.0**	**2.5**	**3.0**
>6-20	**<3-15**		**0.50**	**0.42**	**0.36**	**0.31**
>2-6	**<15-30**		**0.68**	**0.57**	**0.49**	**0.43**
>0.6-2	**<30-45**		**0.89**	**0.73**	**0.63**	**0.55**
>0.2-0.6	**<45-60**		**1.04**	**0.86**	**0.74**	**0.65**

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/Q[1] (ft^2/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:

a. Where garbage disposal units **or grinder/ejector pumps** are installed or proposed, the value obtained from this table shall be increased by a factor of [25] **50** percent for use in disposal field sizing.

(e) Any system designed in accordance with Table 10.2(d) or (e) above shall not be sized less than 400 square feet of total bottom area and shall also include at least one of the following restrictions, at the administrative authority's discretion, in the application for the proposed design:

1. An area reserved for sanitary sewage disposal, including all necessary separation distance requirements, equal to the total area required if advanced wastewater pretreatment was not included in the design. This area reserved for sanitary sewage disposal may include the area where the proposed disposal area is located; and/or

2. A deed restriction placed on the property prior to the issuance of any certificate of compliance for the system, a copy of which must be maintained in the administrative authority's records that identifies the need for the advanced wastewater pretreatment system and accompanying requirements to maintain that system in perpetuity, as required by N.J.A.C. 7:9A-12.3, including any repairs or alterations to the system as long as the structure served exists on the property.

7:9A-10.3 Specific requirements for conventional disposal field installations

(a)–(d) (No change.)

(e) [Filter] **Except as provided by N.J.A.C. 7:9A-9.8, filter** material shall meet the following requirements:

1.–2. (No change.)

3. The filter material shall be covered with drainage fabric[, untreated building paper or a four to eight inch thickness of salt-hay or straw,] as the laying of the distribution lines progresses. [When drainage fabric or untreated building paper is used,] **In addition,** the following requirements shall be met:

i.–ii. (No change.)

[iii. Use of water-proof paper is prohibited.]

4. (No change.)

(f) (No change.)

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 [or a berm of soil material] meeting the **following** requirements**:** [of N.J.A.C. 7:9A-10.3(f)2 and sloped at a grade of three to one or less.]

i. The retaining wall shall be designed and constructed in a manner that:

(1) Prevents lateral movement or seepage of water through the retaining wall;

(2) Ensures wall stability by including an adequate footing that accounts for the hydraulic forces of effluent and stormwater on the retaining wall and footing; and

(3) Withstands hydrostatic pressure without the use of subsurface drainage mechanisms;

ii. The elevation of the top of the retaining wall shall be no lower than the elevation of the top of the filter material in the disposal area;

iii. The distance from any retaining wall to any property line must be at least the total height of the retaining wall;

iv. The retaining wall shall be designed by a septic system designer 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; 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 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-10.6 Specific requirements for mounded soil replacement disposal field installations

(a) Mounded soil replacement disposal fields shall be constructed as follows:

1.–2. (No change.)

3. The sides of the mound shall be constructed with slopes of three to one or less.

Alternatively, lateral support for the fill layer may be provided by a retaining wall that meets the requirements described at N.J.A.C. 7:9A-10.5(e)5.

(b)-(g) (No change.)

7:9A-10.8 Specific requirements for drip dispersal

(a) The Department shall maintain a list of system integrators that may offer drip dispersal systems that may be used in lieu of the disposal field installation options identified in N.J.A.C. 7:9A-10.1. The following are the requirements for system integrators of systems that wish to be listed by the Department for the incorporation of their drip dispersal designs:

1. All drip tubing and drip emitters shall be wastewater rated, designed to prevent root intrusion, include biologic barriers, and be used in a manner consistent with all manufacturer requirements and recommendations for systems designed, constructed and operated in accordance with this chapter.

2. Any drip dispersal technology system integrator that wishes to be listed shall submit to the Department a written request and copies of their pre-engineered designs, including advanced wastewater pretreatment, that have been certified by the system integrator to be appropriate for drip dispersal systems designed, constructed, operated and maintained in accordance with this chapter.

3. Listed system integrators shall make available up-to-date training, design, installation and maintenance manuals and materials to any administrative authority or the Department upon request.

4. All drip dispersal technology manufacturers and system integrators must comply with all applicable requirements of this chapter.

(b) Drip dispersal systems must be designed by a septic system designer sufficiently knowledgeable of the drip dispersal system they are proposing to include in the design. The system designer shall certify on the plans that they are sufficiently knowledgeable of the

technologies to design the system being proposed. The septic system designer shall provide for the following minimum general design requirements:

1. Drip dispersal systems must be preceded by an advanced wastewater pretreatment device that meets the criteria specified at N.J.A.C. 7:9A-8.3. Septic tank effluent shall not be discharged to a drip dispersal system.

2. Only drip tubing that is warranted fully by the manufacturer for protection against root intrusion for a minimum period of 10 years from installation shall be specified in the design. The warranty must be fully transferable but may be limited to provide requirements for operation and maintenance of the system in conformance with manufacturer requirements.

3. Drip dispersal system designs shall specify that the system shall be installed by an authorized installer in accordance with all requirements of this chapter. The specifications shall include that the authorized installer shall provide the property owner with a copy of all operation and maintenance manuals and the service contract. The specifications shall also instruct the authorized installer to obtain the property owner's written acknowledgement of the need to comply with the provisions of these documents and N.J.A.C. 7:9A-12.3 prior to initiating the installation of any drip dispersal system. Copies of these documents shall be submitted to the administrative authority or the Department upon request.

4. Permeability testing for systems including drip dispersal shall be completed in the soil horizon in which the drip tubing will be installed and shall include percolation tests in accordance with N.J.A.C. 7:9A-6 whenever possible.

5. Drip dispersal systems shall have a minimum vertical separation distance of 24 inches from the point of infiltration (tubing installation depth) to a limiting zone. An additional zone of disposal is not required for drip dispersal systems.

6. Drip dispersal systems shall not be installed in areas where the existing ground surface contains slopes of more than 25 percent. Where the existing ground surface contains slopes greater than 10 percent, drip tubing installations must be hand dug unless the septic system designer certifies a method of installation that provides for measures to protect human health and safety, meets dripperline manufacturer and system integrator requirements and satisfies all concerns of the administrative authority.

7. Drip dispersal systems shall not be installed in areas where the depth to any limiting zone below the existing ground surface is less than 24 inches. Dripperlines shall be located and maintained between a minimum of six inches to a maximum of 12 inches below final grade.

8. The entire system is to be configured as a complete pre-engineered package from a system integrator consisting of, at minimum, an advanced wastewater pretreatment device identified in N.J.A.C. 7:9A-8.3, drip tubing, specialized field fittings, pump/pump chamber components, a filtration unit, headworks, and a control panel as specified in this chapter. All piping, valves, fittings, level control switches, and other components shall be designed and manufactured to resist the corrosive effects of wastewater and common household chemicals.

9. Minimum required separation distances from drip dispersal areas shall be the same as those specified for disposal fields in N.J.A.C. 7:9A-4.3.

10. Permanent corner markers shall be installed at or above grade to identify the extent of the drip dispersal area.

11. The design shall note that the drip dispersal system shall be maintained according to the maintenance requirements at N.J.A.C. 7:9A-12.3.

(c) The septic system designer shall provide for the following minimum design requirements for the drip tubing layout:

1. All drip dispersal systems shall be equipped with pressure compensating emitters rated for use with wastewater. The discharge rate of any two emitters shall not vary by more than 10 percent in order to ensure that the effluent is uniformly distributed over the entire drip field or zone. Emitter separation along the tubing length shall be placed in the dripperlines on two-foot intervals.

2. The distance between dripperlines shall not exceed two feet, except to preserve existing vegetation such as large trees. The dripperlines shall be laid level as possible and shall run with the contour. The maximum lateral length of a dripperline, measured from supply to return manifolds, shall be specified by the septic system designer in accordance with dripperline manufacturer and/or system integrator recommendations.

3. The field shall be sized according to the area loading rate given in Table 10.8 below. The minimum amount of tubing required is the area divided by two (based on a two foot center). For example, based on 60 minutes per inch (mpi), 500 gpd / 0.154 gal/ft^2/day = 3,247 ft^2 of area, 3,247 ft^2 of area /two-foot center = 1,624 feet of tubing, an area approximately 102 feet by 32 feet would be required. Septic system designers may specify lesser or greater tubing separation depending on the specific site conditions such as to account for vegetation. However, the minimum tubing length must be provided. A

minimum of two zones is recommended. In the case of smaller drip dispersal areas, and in consideration of a system integrator's minimum zone size, single zone systems, and/or closer drip tubing and/or drip emitter spacing may be permissible.

4. Drip lines may be installed below the soil surface using a vibratory plow, a standard trencher (maximum six-inch width), or by manual or hand installation to a maximum depth of 12 inches from the soil surface, with six to eight inches being the optimum installation depth. Cable pullers must not be used where the tubing installation depth is within three inches of clay loam and clay texture or the soil is contains particles that exceed 75 mm in diameter. Other methods of installation may be considered by the administrative authority. Drip tubing is prohibited in standard backhoe trenches, except for systems designed as provided in (c)7 below. Installations of drip dispersal systems are additionally subject to the following:

i. The dripperline shall be installed by a method that will prevent pulling, stretching, or crimping of the dripperline, and smearing, compaction, or altering of the soil texture. The method shall be acceptable to the dripperline manufacturer, system integrator and specified in the proposed design.

ii. Drip tubing shall not be installed during unsuitable soil moisture conditions. In soil textures other than sands or loamy sands, drip tubing installation shall not be carried out when the soil moisture content is above the lower plastic limit from the surface of the ground to 12 inches below the proposed tubing installation depth. To identify this limitation, when a small lump of soil, taken within the above depth, can be rolled out with the fingers to form a wire or rod, one-eighth of an inch in thickness, and does not crumble when handled, the soil is too wet to proceed with the installation.

iii. On sites where vegetation will be removed, methods to minimize soil disturbance must be used. Any soil disturbance below four inches from the ground surface shall be backfilled with fill material meeting the specifications of N.J.A.C. 7:9A-10.1(f)4. Additional fill material and/or topsoil may be used, provided the drip tubing will be installed with at least two inches of specified fill above the drip tubing. The fill material must be applied in shallow layers no greater than six inches in thickness and installed in a manner established by the manufacturer and/or system integrator to prevent an abrupt textural interface with the native soil.

iv. All system control units, valve boxes, drip dispersal lines, conveyance lines and other system appurtenances shall be designed and installed to prevent freezing in accordance with the system integrator and dripperline manufacturer recommendations.

v. Both the septic system designer and/or a system integrator's representative may be required by the administrative authority to conduct a final construction inspection and/or certify that as-built conditions are in conformance with the approved system design and/or submit as-built plans.

5. All drip dispersal systems shall be designed with devices such as check valves, piping configurations, or methods such as elevated loops to prevent the redistribution of effluent at pump shut off by gravity in the dispersal area. The device shall additionally minimize the effluent remaining in the lines after the end of a dose cycle from redistribution to lower portions of the drip zone. Variability in distribution shall never exceed 10 percent.

6. The system integrator shall make available in their pre-engineered design head loss charts, tables and/or formulas, for the filtration headworks and for various drip tubing lateral lengths, during a dosing and flushing cycle, and other pertinent information such as

minimum/maximum zone size for the proper dosing and flushing of the drip dispersal system. The minimum scouring/flushing velocity (no less than two feet per second) for the distal end of the drip tubing lateral and minimum and maximum operating pressures shall be provided.

7. The following are the requirements for mounded soil replacement drip dispersal designs:

i. In addition to the applicable requirements of this section, mounded soil replacement drip dispersal systems shall require a minimum soil depth of 24 inches from the existing ground surface to any limiting condition and shall not be used at sites where there is a 36-inch or more depth to a limiting zone where a non-mounded drip dispersal system can be designed, as described in this section.

ii. Undisturbed soil and the depth of dispersal are to be maximized below the bed bottom but in no case are to be less than 12 inches in thickness. The minimum depth of soil excavation for fill material depth is to be four inches. In all cases the fill material is to be mounded, extending a minimum of six inches above grade to provide a minimum of 24 inches of separation, fill material and soil, to a limiting zone. Fill material must extend above the dripperlines by at least two inches. Fill material must be installed in accordance with the system integrator and dripperline manufacturer requirements and recommendations to prevent an abrupt textural interface with native soil.

iii. The bed bottom is to be installed level. The length to width ratio of the bed(s) is to be maximized as the site allows. In no case shall the length to width ratio be less than 3:1. The use of two or more narrow beds to maintain the required minimum depth to a limiting condition and geometry may be necessary. One bed may be possible on sites where the

existing ground surface is flat across the entire area required for the bed however, re-grading shall not be allowed in any case. The minimum separation between beds (sidewall to sidewall) is to be six feet of native soil material.

iv. Permeability testing must be conducted in the most hydraulically restrictive zone within the 24 inches of native soil below the proposed bottom of the fill material. The permeability of the fill material shall not be used to size the drip dispersal area.

v. The bed bottom loading rate for mounded soil replacement drip dispersal designs shall be sized in accordance with the area loading rate in Table 10.8 below multiplied by three. For example, based on 60 mpi, Table 10.8 provides for a 0.154 gal/ft^2/day area loading rate x 3 = 0.462 gal/ft^2/day for the bed loading rate. For a three -bedroom home, 500 gpd /0.462 = 1,083 ft^2 of bed bottom required. If there is 45 feet of available length (contour) the bed would be approximately 45 feet by 24 feet (1,083 ft^2 of bed bottom /45 feet) representing a ratio of approximately 2:1. Two beds, each 45 feet by 12 feet, and separated by a minimum of six feet, would be required, representing a ratio of 3.75:1 per bed. In the case of these smaller dispersal areas, and in consideration of a system provider's minimum zone size, single zone systems, and/or closer tubing spacing (typically twelve inches or less) may be indicated. In no case shall the total area of the drip dispersal bed(s) be less than 400 square feet.

vi. An additional lateral fill extension is not required. The minimum distance from the edge of the fill bed to any drip line is to be one foot. Tubing separation over the soil replacement bed may be less (with a minimum separation of 0.5 feet) to accommodate minimum zone sizes in accordance with manufacturer's recommendations. The drip tubing is to be covered with a minimum two inches of additional fill material. Drainage fabric, in

accordance with the requirements of N.J.A.C. 7:9A-10.3(e)3, shall then be placed over the additional fill material covering the drip tubing.

vii. If the permeability of the zone of disposal for a soil replacement system is greater than 20 inches per hour, the septic system designer shall use a design value of six inches per hour for the purposes of designing the drip dispersal field. For areas where only a basin flood test is possible, permeability shall be established pursuant to N.J.A.C. 7:9A-6.7(f) provided percolation testing or tube permeameter testing is completed in the fill material after emplacement and compaction of the material and the testing demonstrates a permeability greater than six inches per hour.

viii. All other considerations regarding the design of a mounded soil replacement drip dispersal system shall be in conformance with N.J.A.C. 7:9A-10.6.

(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. 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. Mechanical indexing valves to control zone dosing are prohibited.

ii. To maintain uniform distribution, the minimum drip dose volume in a drip dispersal network is calculated using 80 percent of the dose being dispersed during times of equal distribution, accounting for pressurization time and redistribution at pump shut off. In no case shall the minimum drip dose volume be less than three times the volume of the pipe (plus the volume of supply/return lines and field manifolds where applicable).

2. A dosing chamber shall be employed after the advanced wastewater pretreatment device and before the drip dispersal system, and shall be sized and equipped so as to permit timed dosing of the daily sanitary sewage flow with adequate reserve storage capacity for those times when the system is inoperable. The system design shall comply with the following:

i. The dosing chamber working volume (surge storage) shall be a minimum 60 percent of the design volume. This volume may be calculated from the timer enable to the high water alarm floats. These dosing tanks may be less than 1,000 gallons.

ii. The dosing chamber shall be equipped with an audible and visual high-water alarm set to provide reserve capacity to allow for the prompt repair of the system. The minimum amount of reserve volume above the high water alarm is 25 percent of the design volume. A low-water separate cutoff device (float) shall be provided to prevent damage to the pump during low-water conditions and shall be separate from the timer enable device (float).

iii. The dosing chamber shall be fitted with watertight access risers to grade that are secured against unauthorized entry.

iv. All other aspects of the dosing chambers shall meet the minimum requirements for dosing tanks specified in N.J.A.C. 7:9A-9.2.

3. The system design shall provide the means, at minimum, to accurately calculate flows, count pump cycles, determine pump elapsed time, count automated flushing events and report alarm events. This requirement may be accomplished by having a flow meter and a control panel that performs these functions. These functions are necessary to provide proper operation and maintenance and to determine and monitor emitter performance, scouring or flushing performance, and water use. The system control panel and associated controllers shall also include:

i. A programmable timer to regulate dosing frequency/volume and record dosing information.

ii. Manual capability to operationally determine filter flushing, dosing, and flushing.

iii. Components that are restricted to those that are UL Listed.

iv. A schematic and manual shall be provided to the homeowner with control panel.

v. Telemetry or an auto dialer for alarm conditions related to the drip dispersal components in addition to those required at N.J.A.C. 7:9A-8.3(b)6.

vi. Electrical control equipment shall be mounted within a NEMA 4X rated enclosure with a rigid latching door.

vii. Switches shall be clearly identified, and all internal wiring shall be factory installed.

(e) The septic system designer shall provide for the following minimum filtration and field flushing design requirements:

1. Final filtration must be provided by a hydraulic unit fitted with in-line screen or disk filter(s) to remove suspended solids to prevent clogging of the emitters.

i. The filter(s) shall achieve the drip tubing manufacturer's minimum specified filtration at a rate equal to or greater than the peak discharge rate, typically during network forward flushing.

ii. The filter(s) shall be washed automatically on a routine basis as specified by the system integrator, normally at the beginning of each dose event.

iii. The system shall be designed to return filter and drip tubing flush residuals to the head of the pretreatment train or a settling tank to allow for primary settling prior to the dosing station.

iv. The filter and drip tubing flush return volume shall not exceed the hydraulic capacity of the pretreatment device.

v. The hydraulic unit (and other components) must be protected from temperatures below freezing in accordance with the manufacturer's specifications.

2. The system shall be capable of forward flushing each drip field or zone at a minimum fluid velocity, as required by the manufacturer of the dripperline and the system integrator.

i. The fluid velocity shall be no less than two feet per second.

ii. The residuals shall be returned back to the head of the pre-treatment train or if site design allows, a separate settling tank to allow for primary settling prior to a dosing station.

iii. Field flushing velocity shall be designed to be met at the distal end of each lateral connection.

iv. Each zone shall be automatically flushed a minimum of once every 50 cycles. However, the flush return volume shall not exceed the hydraulic capacity of the advanced wastewater pretreatment device.

3. Pump selection shall take account of the operating volume and pressure for the drip dispersal field when calculating the total dynamic head required for filter flushing and/or back flushing, field dosing, and dripperline flushing. All disposal and flushing parameters shall meet the listed system integrator's requirements and fall within the operational range of the pump selected.

TABLE 10.8

DRIP DISPERSAL AREA LOADING RATES

Percolation Rate	Area Loading Rate
Mpi	gal/ft^2/day
5	0.303
10	0.278
15	0.253
20	0.228
25	0.211
30	0.203
35	0.196
40	0.189
45	0.180
50	0.173
55	0.162
60	0.154

SUBCHAPTER 12. OPERATION AND MAINTENANCE

7:9A-12.1 System use

(a) The individual subsurface sewage disposal system shall be used only for the disposal of wastes of the type and origin provided for in the approved engineering design. No permanent or temporary connection shall be made to any **other** source of wastes, wastewater or clean water. This prohibition does not apply to those plumbing fixtures which are normally present within the type of facility indicated in the approved engineering design, such as air conditioning condensate, heating system condensate and water softener backwash.

(b)–(g) (No change.)

7:9A-12.2 [(Reserved)] **System maintenance**

(a) The individual subsurface sewage disposal system shall be maintained in accordance with this chapter, the system approval issued by the administrative authority, and any applicable mandatory maintenance program including, but not limited, to any applicable ordinance adopted in accordance with N.J.A.C. 7:9A-3.1 or 7:15-5.25(e), by the system owner, or a qualified professional retained by the system owner in order to prevent the system from malfunctioning and/or becoming non-compliant as defined in N.J.A.C. 7:9A-3.4.

(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.

(c) The Department recommends the use of the applicable sections of the inspection protocol established in N.J.A.C. 7:9A-12.6 for inspecting any portion of a system during maintenance activities.

(d) Systems approved by a treatment works approval shall be maintained in accordance with conditions specified in that approval.

(e) Any system not maintained in accordance with this section shall be deemed non-compliant in accordance with N.J.A.C. 7:9A-3.4.

7:9A-12.3 [(Reserved)] **Maintenance and monitoring requirements for systems incorporating advanced wastewater pretreatment devices**

(a) The owner of a system that includes an advanced wastewater pretreatment device, including all drip dispersal systems, shall have in place a service contract, throughout the life of the system, with an authorized service provider. A current service contract signed by the property owner and an authorized service provider must be in place prior to issuance of any certificate of compliance, any occupancy permit, or any sign off by the administrative authority required for the issuance of any construction application, applied for after the installation of the advanced wastewater pretreatment device, to a municipality pursuant to N.J.S.A. 58:11-25.

(b) Failure to be in possession of a valid service contract shall constitute a violation of the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq. and a noncompliance violation

of N.J.A.C. 7:9A-3.4. Each day the property owner fails have in place a valid service contract shall constitute a separate and distinct violation.

(c) Upon expiration of a service contract, a new contract, which shall be at least one year in duration, shall be entered into by the property owner with an authorized service provider. If the property owner chooses to enter into a service contract with a different authorized service provider than under the expiring contract, a copy of the new, fully-executed service contract shall be submitted to the administrative authority by the property owner within 14 days after the expiration of the previous contract. The new service contract must demonstrate that service for the system under an authorized service provider has been continuous.

(d) If a property owner fails to renew the service contract, the authorized service provider shall provide written notification of the service contract expiration within 30 days after the expiration to the administrative authority.

(e) The following are the requirements for an authorized service provider:

1. All advanced wastewater pretreatment devices and drip dispersal systems shall be maintained according to the manufacturer's/system integrator's maintenance requirements. Current maintenance manuals shall be obtained by the authorized service provider prior to performing maintenance.

2. Advanced wastewater pretreatment devices and drip dispersal systems shall be inspected by an authorized service provider on the following schedule, at a minimum:

i. Once within 30 days following system startup;

ii. Subsequent to initial inspection under (e)2i above, twice per year for the first two years of system operation, once per year thereafter;

iii. At the time of transfer of the property with the new system owner; and

iv. Inspections shall be conducted on a more frequent basis if required by the manufacturer or system integrator, as applicable.

3. All inspection results shall be recorded on an inspection form, copies of which shall be made available by the manufacturer/system integrator. The forms must be signed by the authorized service provider and shall be submitted to the administrative authority within 30 days after the inspection. Online access or electronic submission of the data may be substituted for the physical form, at the administrative authority's discretion.

4. At each regularly scheduled maintenance visit the authorized service provider shall, at minimum, observe, monitor and record:

i. The wastewater level in the tanks;

ii. Any effluent/pump filter for clogging and clean as needed;

iii. Clarity in NTUs;

iv. The final effluent for odor;

v. All tanks for oily film;

vi. All tanks for foam;

vii. The pH of final effluent;

viii. The ponding of effluent around the advanced wastewater pretreatment device and/or disposal area;

ix. Pump cycle and run time meters;

x. The condition of drip dispersal system headworks and filters and service as needed; and

xi. Any other requirement established by the manufacturer or system integrator.

5. At least once per year the authorized service provider shall, at a minimum:

i. Measure the sludge and scum levels in the septic tank and notify the homeowner if the tank is in need of pumping; and

ii. Check the effluent filter for clogging and clean, as needed.

6. The authorized service provider shall have proper equipment and training to access and program any system control panel on site.

7. The authorized service provider shall monitor the telemetry control panel or auto dialer alarms required by N.J.A.C. 7:9A-8.3(b)6 and respond to any alarm condition in the manner specified by the manufacturer of the advanced wastewater pretreatment device and/or system integrator of a drip dispersal system.

7:9A-12.6 [(Reserved)] **System inspection protocol for inspections conducted during real property transfer**

(a) To be a Department recognized method of inspection, a septic system inspector shall conduct all system inspections for a transfer of real property in accordance with this section and the protocol described in chapter Appendix E, incorporated herein by reference.

(b) Septic system inspectors shall follow all inspection requirements established by the manufacturer of a product used in lieu of laterals and/or filter material pursuant to N.J.A.C. 7:9A-9.8, advanced wastewater pretreatment device used pursuant to N.J.A.C. 7:9A-8.3, or system integrator of a drip dispersal system used pursuant to N.J.A.C. 7:9A-10.8, as applicable, in addition to the protocol in chapter Appendix E.

(c) The septic system inspector shall describe all observations as to the condition of a system during an inspection without the use of the terms “malfunctioning”, "failure" or

"non-compliant". A system may only be classified as “malfunctioning”, "failure" or "non-compliant" by the administrative authority or the Department in accordance with N.J.A.C. 7:9A-3.4(d).

(d) The septic system inspector shall report the results of inspections to the administrative authority in accordance with the following:

1. An initial report shall be made within 24 hours after the inspection by telephone, facsimile, email or another means by which delivery can be verified when any of the conditions identified in the “Health Department Reporting” section of chapter Appendix F is observed; and

ii. The completed chapter Appendix F Onsite System Inspection Form, incorporated herein by reference, shall be provided within 10 business days after the system inspection is completed.

(e) In addition to the Onsite System Inspection Form in chapter Appendix F, the septic system inspector shall provide a written analysis of the possible effects of the precipitation event or snow melt on the results of the inspection when inspections are conducted within 48 hours after a precipitation event or snow melt.

(f) The Department’s inspection protocol technical manual detailing the methods for conducting an inspection in accordance with the protocol in chapter Appendix E is available through the Department at the address listed in N.J.A.C. 7.9A-3.9.

(g) The inspection form in chapter Appendix F is not applicable to cesspools, privies, outhouses, pit toilets or latrines. When the septic system inspector identifies such sanitary sewage disposal units, the presence of the unit shall be reported to the administrative

authority in writing within 48 hours of the inspection. The septic system inspector shall additionally notify their client of the requirements of N.J.A.C. 7:9A-3.16(b).

SUBCHAPTER 13. CRITICAL AREAS

7:9A-13.1 Identification of critical areas

(a) The Department shall investigate various geographical areas of the State to determine whether any such areas should be restricted as to the types of sewerage facilities which may be thereafter located, constructed, altered or repaired. Areas identified as requiring imposition of these restrictions shall be designated as critical areas. Potential areas to be investigated may be identified by:

1. The Department;

2. Requests from administrative authorities and other public health agencies; and

3. Any person that provides documentation to the Department that demonstrates that adverse conditions exist related to the ground or surface water, such that special measures are required to protect the environment or public health, safety or welfare.

(b) In conducting such an investigation, the Department shall give consideration to factors such as ground water and surface water quality, soil conditions, ground water levels, proximity to surface waters, population densities and projected growth trends and such other factors that could affect the safe and proper operation of sewerage facilities, including impacts to human health and impairment of the environment in the potential critical area.

7:9A-13.2 Establishment of critical areas

(a) If the Department determines that it is essential to the environment or public health and well-being of the inhabitants residing in the area to restrict or regulate the type or types of sewerage facilities which may thereafter be located, constructed, altered or repaired in such area, it shall proceed with designation of the area as a critical area for sewerage purposes.

(b) Prior to designating an area as a critical area for sewerage purposes, the Department shall provide notice of its determination that the area qualifies for critical area designation and hold a public hearing within the area proposed for critical area designation.

1. The Department shall publish a notice of the hearing specifying the time and place where the hearing will be held not less than 15 days prior to the hearing in each municipality any portion of which is located within the proposed critical area.

2. The notice shall be published in a newspaper with general circulation in the identified critical area.

3. The notice shall include a description of the area proposed to be designated as a critical area and a brief summary of the type or types of sewerage facilities that may thereafter be located, constructed, altered or repaired in the proposed critical area.

(c) No sooner than 60 days after the Department has conducted its public hearing, the Department shall determine whether the area should be designated as a critical area. If the designation as a critical area is determined to be appropriate by the Department, the Department shall publish a notice in accordance with (d) below, identifying:

1. The geographical area contained within the critical area; and

2. The type(s) of sewerage facilities which may thereafter be located, constructed, altered or repaired in the critical area in order to protect public health and the environment.

(d) New critical area designations shall be distributed by the Department to affected municipal governing bodies and administrative authorities in the newly established critical area. The designation shall specify, at a minimum, the information listed in (c)1 and 2 above.

(e) The Department shall publish in the New Jersey Register a notice of administrative change revising the list of critical areas contained in Table 13 below and shall mail notice of such revision to the affected municipality(ies). The list in Table 13 is for informational purposes only. Any person may obtain the most current list of such critical areas from the Department's Division of Water Quality, Bureau of Nonpoint Pollution Control at 401-02B, P.O. Box 420, Trenton, NJ 08625 or from the Division's website (http://www.state.nj.us/dep/dwq).

TABLE 13

CRITICAL AREAS

Critical Area	Affected County(ies)	Affected Municipality(ies)	Geographical Area	Restriction(s)

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 1 – General Information

1. Type of Permit Needed (Check **and Fill-in** applicable categories):

___ **a.** New Construction

___ **b.** Alteration/ No Expansion or Change [of]**in** Use

___ **c.** Alteration/Expansion or Change in Use

___ **d.** Alteration/Malfunctioning System

___ e. Repair (in-kind replacement)/ Malfunctioning system

___ f. Repair (in-kind replacement) System is not malfunctioning

___ **g.** Deviation from Standards [___ Repairs to Existing Systems]

___ h. New system installed (existing structure)

2.-7. (No change.)

8. If d. or e. in 1. above are checked, indicate the type of malfunction and its cause (check all that apply):

__ Contamination of nearby wells or surface water bodies by sanitary sewage or effluent

__ Ponding or breakout of sanitary sewage or effluent onto the surface of the ground

__ Seepage of sanitary sewage or effluent into portions of building below ground

__ Back-up of sanitary sewage into the building served, which is not caused by a physical blockage of the internal plumbing

__ Any manner of leakage observed from components that are not designed to emit sanitary sewage or effluent.

__Direct discharges to ground water (no zone of treatment)

Describe the cause of the malfunction:_____

_____

_____

9. Please expand on Question #1, above, by checking if any of the following apply):

___ A privy, outhouse, latrine or pit toilet is present, a system must be installed,

___ A system must be upgraded as part of a real property transfer,

___ A cesspool has been identified during a real property transfer and a conforming system must be installed,

___ A malfunctioning cesspool has been identified and a conforming system must be installed.

[8.] **10**. Other Approvals/Certification/Waivers/Exemptions **required for this project** (Attach to Application):

___ Pinelands Commission

___ Highlands Water Protection and Planning Act

___ U.S. Army Corps of Engineers

___ NJDEP—Bureau of Flood Plain Management

___ Other—Specify: _____

[9.] **11**. I hereby certify that the information furnished on Form 1 of this application is true. I am aware that false swearing is a crime in this State and subject to prosecution.

Signature of Applicant _____ Date_____

…

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 2a—General Site Evaluation Data Lot ___ Block ___

1.-5. (No change.)

6. Considerations Relating to Disturbed Ground:

a) Type of Disturbance (Check appropriate categories):

_ Filled Area _ Excavated Area _ Re-graded Area

_ Subsurface Drains _ Other—Specify __

b) [Pre-existing Natural] **Existing** Ground Surface

Elevation Relative to [Existing] Ground Surface _____

Method of Identification _____

7.-9. (No change.)

APPENDIX E.

SYSTEM INSPECTION PROTOCOL

1. Procedures for preparing and reporting a system inspection

(a) Obtain a signed inspection authorization from the owner of the property or its authorized agent before commencing any of the following.

(b) Contact NJ ONE CALL at 1-800-272-1000 to delineate subsurface utilities.

(c) Conduct a file review of the administrative authority's records.

(d) Obtain the following minimum preliminary information regarding the subject system from the homeowner prior to the inspection:

i. Statistics regarding the type, age, number and use of onsite system(s) and structure(s) being inspected.

ii. The presence of garbage grinding equipment.

iii. The date of last treatment tank pumping and frequency.

iv. Any sanitary sewage discharges that bypass the system.

v. The summarized results of previous inspections conducted on the system.

2. Procedures for conducting the preliminary field investigation

(a) Record the weather at the time of inspection.

(b) Walk the entire interior of the structure(s) and examine for unexpected fixtures, plumbing or discharges.

(c) Walk the exterior property looking for abnormally lush vegetation or other indications of discharges on or through the surface of the ground, streams, road ditches, storm drains or unexpected pipes.

(d) Note and record if vegetation with invasive root systems have been located above any system component or within ten (10) feet of the perimeter of the disposal area.

(e) Note and record the presence of any structures or heavy objects placed above any of the system components. Include any evidence of heavy objects, such as tire tracks from vehicles, being previously present.

(f) Create a site sketch of all relevant onsite wastewater treatment system components and water supply wells.

(g) Locate and gain access to the treatment tank(s) and determine their composition.

(h) Check for surface leakage into tanks and then locate other system components.

(i) Compare the information obtained onsite to the information gathered previously and identify any discrepancies.

3. Procedures for inspecting the internal plumbing

(a) Confirm the number, size and general exit point(s) of the waste lines.

(b) Determine if any sanitary sewage generating fixture can not reasonably be piped to the observed exit point.

(c) Confirm that the discharge points of all sump pumps are separate from sanitary sewage lines and that the sanitary sewage is not directed to this equipment.

4. Procedures for inspecting treatment tanks

(a) Confirm liquid level is below the inlet invert and equal to the height of the outlet invert.

(b) Evaluate and record scum thickness and sludge depth through the main access port.

(c) Do not pump any treatment tank until the disposal field area has been investigated.

(d) Pump all treatment tanks and compartments using the main access (largest opening). Sanitary sewage must be removed, at a minimum, to within two inches of the tank bottom.

(e) Identify sanitary sewage flows into the tank or defective septic system components and deficiencies including the tank bottom.

(f) Verify that all fixtures discharge to the treatment tank.

(g) Check for continuous flow through the building sewer and into the treatment tank.

(h) Determine treatment tank construction, composition (material), and condition of the tank, the baffles, and the cover by accessing the interior of the tank.

(i) Aerobic treatment tanks must be checked by observing the electrical and mechanical operation of the pumps and compressors in operation.

(j) No inspection may be considered complete until every tank is pumped and its condition evaluated.

5. Procedures for inspecting holding tanks

(a) Identify that the holding tank has audible and visual alarms.

(b) Determine the tank's capacity.

(c) Measure and record the liquid level; then pump all tanks and compartments. Examine for any defects, including the tank bottom.

(d) Determine the tank does not leak and is watertight.

(e) Recommend specific actions of ongoing maintenance.

6. Procedures for inspecting dosing and lift pumps/tanks and siphon tanks

(a) Check the disposal field area before turning on any pump.

(b) Check the condition and integrity of all pump and siphon tanks, using the tank inspection procedures described previously, including the alarm system.

(c) If the system has a pump, verify the operation of every pump and control system.

(d) Visually inspect all electrical components. Verify that the alarm and pump are on separate circuits.

(e) Verify that pumps are elevated above the tank bottom and resting on a concrete block.

(f) For siphon pressurized systems, open the observation port and check for continuous trickling.

(g) Measure and record the liquid level; then pump the tanks using the main access.

7. Procedures for inspecting effluent delivery and distribution systems

(a) If the liquid level in the distribution system is above the lowest point of the outlet of the treatment tank, further investigation is needed.

(b) If a distribution box is found and exposed, it must be evaluated; if a distribution box is not found, the absorption area investigation should proceed. If known to exist, the location of the distribution box (D-box) shall be noted on the site sketch or a notation that further investigation would be needed to locate the D-box.

(c) Evaluate the structural integrity of the D-box and check for the presence of solids, which must be removed. D-boxes must be watertight. Confirm the D-box is level and that effluent is equally distributed to the laterals.

8. Procedures for inspecting subsurface systems: seepage pits

(a) Determine the structure's capacity; then measure the distance from the water level to the bottom of the inlet pipe.

(b) Determine total design volume using the design criteria in N.J.A.C. 7:9A-7.4.

(c) Determine the available storage capacity below the bottom of the inlet pipe.

(d) Confirm there is one day's storage capacity below the bottom of the inlet pipe.

(e) Evaluate the liquid, scum and sludge levels; then pump the seepage pit. Note all deficiencies and excessive inflow.

(f) If a system has both a seepage pit and an disposal area, evaluate each separately.

9. Procedures for inspecting disposal fields: beds or trenches

(a) Determine the type, location and size of the disposal field.

(b) Determine if there is standing liquid in the disposal field by probing or other means available. Measure the depth of the effluent throughout the disposal field. Measure the

difference between the liquid's depth and the invert of the laterals at the distribution box/manifold or the base of a lateral as best determined by the inspector. This depth (distance) is called the dry aggregate. Inspection ports may not be used for this evaluation.

(c) If there are six (6) or more inches dry aggregate below the invert of the laterals, the disposal field is satisfactory. If there are less than six (6) inches of dry aggregate, a high water condition must be noted.

(d) When liquid is present in the disposal field, it should be of an equal depth and evenly distributed throughout the entire bed.

(e) If the disposal field is completely saturated, do not pump the treatment tank.

10. Additional inspection criteria for trench systems

(a) In serial distribution systems, confirm that higher trenches are saturated prior to lower trenches.

(b) In gravity supplied trenches, confirm that trenches receive effluent equally from the D-box.

11. Additional inspection criteria for mounded systems

(a) Probe the aggregate in mound systems. Note any standing liquid.

(b) Examine the mound for leakage on the top, side slopes, and toe of the slope; sufficient depth of soil cover at the top edges, animal burrows, deeply rooted vegetation and erosion.

12. Procedures for conducting hydraulic load testing

(a) When a hydraulic load test is determined to be necessary, describe why the recommendation is being made and what the test will entail.

(b) All hydraulic load test which does not follow the methodology in the Department's inspection protocol technical manual, must be designed and sealed by a septic system designer to evaluate how liquid levels in a disposal field respond to an appropriate volume of introduced clean water.

(c) Whenever possible, water from a public supply or brought in from off-site should be used to conduct hydraulic load testing. Permission to use water supplied from a private well for conducting hydraulic tests on systems must be obtained from the current well owner, in writing, prior to use. In no case shall the use of the well exceed its design yield. Volume of withdrawal from a private well shall be limited to no more than two (2) gallons per minute.

13. Procedures for inspecting advanced wastewater pretreatment components and drip dispersal systems

Any advanced wastewater pretreatment device and drip dispersal systems may only be inspected by personnel trained or otherwise familiar with the specific technology. A review of the homeowner's service records, contacting the maintenance provider and the manufacturer of the equipment must be conducted. An estimate of the annual cost of operating the system and maintenance agreements must be provided.

APPENDIX F

INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL INSPECTION REPORTING FORM

NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE MARCH 7, 2011 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN.

ONSITE SYSTEM INSPECTION FORM

Inspection Overview • **Preliminary system information** • **Inspection of treatment tanks** • **Absorption system inspection** • **Disposal/conveyance system assessment** • **Identification of any alternative technology approved components** **- Requires additional inspection**	**Inspection form is not applicable to cesspools, privies, outhouses, pit toilets or latrines. Identification of such units shall be reported to the administrative authority**	**INTERNAL USE ONLY:**

CLIENT INFO

Client Name: _____
Different from owner? () yes () no

Client Address:
_____

_____

_____

Contact Method:
home tel. _____
work tel. _____
e-mail _____

SYSTEM LOCATION

Inspector Name: _____

Inspection Date: _____
System Address (including municipality):
_____
_____
_____

New Jersey Coordinate: Block(s):
_____Lot(s):_____
Was GPS used? () yes () no

Preliminary Information:
Weather:

_____

Last precipitation:

_____

Age of system: _____
Type of dwelling?
() Residential Number of Bedrooms: _____

() Non residential
Describe:_____
How many systems are being inspected? _____

List any commercial activities or high impact hobbies:
_____

_____

Describe prior problems and/or repair history including soil fracturing or use of chemical additives. Include dates and explain why the remedial measures have been applied to the system:
_____

_____

Date file review requested with administrative authority:

_____

	Yes	No
Is there a site plan or septic map available?	**()**	**()**
Is the dwelling currently being occupied?	**()**	**()**
If so, how many occupants?		
_____		
If no, date last occupied?	**()**	**()**
_____	**()**	**()**
If there is a washing machine, is it connected to a separate gray water disposal system?	**()**	**()**
Is the dwelling free of additional gray water systems?	**()**	**()**
Is the dwelling free of garbage disposal systems?	**()**	**()**
Is the dwelling free of sump pump discharges to the system?	**()**	**()**
Is the dwelling free of any historical sanitary sewage back ups into the structure?	**()**	**()**
Does all sanitary sewage enter the septic system and no types of sewage bypass exist?		
Septic Tank Pumping:	**()**	**()**
Is the septic tank pumped regularly?		
Frequency: _____		
Date of last pumping:_____		
Was file review completed prior to inspection?		
If no, explain why below		

Comments:

Treatment Tank:

Type of system being inspected? *
() Septic tank () Other_____
() Gray water () Multi-compartment: #_____

Name the material of the system?
() Concrete () Block
() Steel () Other_____

Approximate Treatment Tank Volume: _____gal.

Evaluate the conditions of tank below:

	Satisfactory	Unsatisfactory	N/A
Top and lids	()	()	()
Inlet baffle	()	()	()
Outlet baffle	()	()	()
Cracks or Leaks	()	()	()
Sanitary sewage flow from structure	()	()	()

**** Cesspools, privies, outhouses, latrines and pit toilets are not systems and must not be inspected in accordance with this protocol. If a cesspool, privy, outhouse, latrine or pit toilet is used for onsite wastewater disposal, the administrative authority shall be notified.***

	Yes	No
Main tank lid opened for inspection?	()	()
Liquid level below the tank's inlet invert?	()	()
Liquid level below the tank's outlet invert?	()	()
Treatment tank pumped for this inspection?	()	()
Are all portions of the tank(s) clear of structures like a deck or a driveway?	()	()
Is the area clear of evidence that sanitary sewage has surfaced above the treatment tank?	()	()
Does water flow unimpeded from the treatment tank?	()	()
Is an effluent filter a part of the system?	()	()
If yes, does it appear properly maintained?	()	()
Are there any other types of accessory units present?	()	()

Depth to top of tank: _____inches

Depth to top of tank access:

_____inches

Comments: _____

_____

Absorption Area:

1. Name the type of the absorption system?
() disposal bed () disposal trench
() seepage pit () mounded
() other _____

2. Was the absorption system located? **() yes () no**

If no, explain below in Comments section.

3. Are inspection ports present? **() yes () no**

If yes, how many? _____

Were the inspection ports checked? **() yes** () no () N/A**

Was a separate probe dug in the absorption area to confirm the observations in the inspection ports? **() yes () no () N/A**

4. Is the area of the absorption system free of sanitary sewage odors? **() yes () no**

5. Does sanitary sewage flow from the treatment tank to the absorption system without flowing back? **() yes () no () N/A**

6. Is the area above or near any of the system components free from visible signs of effluent or sanitary sewage? () yes () no

7. Are the areas at or near the inlet invert of any absorption area component free of visible signs of sewage or effluent?

() yes () no

8. Are areas above or near system components free of lush vegetation? () yes () no

9. If exposed, is the distribution box in satisfactory condition? () yes () no () N/A

If not exposed, explain why not:_____

10. Is the area directly over any part of the absorption system free of any evidence of large objects (such as boulders, sheds, landscaping, boats, cars, tractors, pools)? () yes () no

*****All levels observed must be included in report***

Comments:

Sketch the approximate system location in this space provided:

Dosing or Pump Tank:	**Yes**	**No**	**N/A**
1. Does the system contain a pump tank?	**()**	**()**	**()**
2. Is the pump operating?	**()**	**()**	**()**
3. Do the alarm(s) on the pump work?	**()**	**()**	**()**
4. Is the pump elevated above the tank floor?	**()**	**()**	**()**
5. Is the lid in satisfactory condition?	**()**	**()**	**()**
6. Is the tank in satisfactory condition?	**()**	**()**	**()**
7. Is the tank free of accumulated solids?	**()**	**()**	**()**

Summary:	**Satisfactory**	**Satisfactory with Concerns**	**Unsatisfactory**	**Requires Additional Investigation**	**N/A**
Identification of cesspool, privy, outhouse, latrine and pit toilet			**()**		
Condition of the treatment tank(s)	**()**	**()**	**()**	**()**	**()**
Condition of the conveyance and pump system(s)	**()**	**()**	**()**	**()**	**()**
Condition of the absorption area(s)	**()**	**()**	**()**	**()**	**()**
Condition of any accessory components	**()**	**()**	**()**	**()**	**()**

Comments: _____

_____

_____

_____

_____

_____

Health Department Reporting:

Note if any of the following conditions were observed during the inspection:

( ) 1. Ponding or breakout of sanitary sewage or effluent onto the surface of the ground
( ) 2. Seepage of sanitary sewage or effluent into portions of buildings below ground
( ) 3. Backup of sanitary sewage into the building served which is not caused by a physical blockage of the internal plumbing
( ) 4. Any manner of leakage observed from or into septic tanks, connecting pipes, distribution boxes and other components that are not designed to emit sanitary sewage or effluent.

Pursuant to N.J.A.C. 7:9A-3.4 notification of any observation that is consistent with a condition noted above should be reported to the administrative authority within 24 hours after the observation. Regardless of observations made, a copy of this report should be provided to the administrative authority within 10 days after the issuance of this report.

If encountered, describe all observed noncompliant conditions encountered during this inspection:

_____

_____

_____

_____

_____

Customer authorization:
I authorize "The Company" to enter the above listed property for the purpose of performing a sub-surface sewage disposal system inspection. I authorize "The Company" to expose parts of the system if required, to determine location and condition. I understand that "The Company" relies on information supplied by the owner(s) of the listed property or their agent and the administrative authority in the evaluation of the sub-surface disposal system. I authorize "The Company" to provide this form to all parties as required.

Customer signature: _____Printed name: _____

Inspector's signature: _____Printed name: _____

Disclaimer:
Based on today's observations and the information provided by the owner(s) or their agent, "The Company" submits this sub-surface sewage disposal system inspection form. The inspection is based on the current condition of the onsite sewage disposal system. "The Company" makes no representation that the system was designed, installed or meets N.J.A.C. 7:9A-1.1 et seq.. "The Company" has not been retained to warrant, guarantee, or certify the proper functioning of the system for any period of time. Because of numerous factors (such as usage, soil type, installation, maintenance) which affect the proper operation of a sub-surface disposal system, as well as the inability of "The Company" to supervise or monitor the use and maintenance of the system, this form shall not be construed as a warranty by "The Company" that the system will function properly for any prospective buyer. "The Company" disclaims any warranty, either expressed or implied, arising from the inspection of the septic system.

This form was developed as a cooperative effort of:
Pennsylvania/New Jersey Sewage Management Association;
Rutgers Cooperative Extension New Jersey Agricultural Experiment Station; and
The New Jersey Department of Environmental Protection Septic System Inspection Protocol Subcommittee