

Salem County Department of Health and Human Services

ENVIRONMENTAL DIVISION

110 Fifth Street, Suite 400 – Salem, New Jersey 08079
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Fax 856-935-8483



November 8, 2013

Re: Garbage Disposal Systems and Ejector Pumps

Municipal Construction Code Officials,

The New Jersey Septic Regulations (N.J.A.C. 7:9A) changed on April 2, 2012. I would like to make you aware of certain requirements that pertain to your office, and how you issue permits in conjunction with the new septic regulations. Resident's of Salem County must come to the Salem County Health Department ("SCHD") to pull permits for new construction, alterations or repairs of their subsurface septic system, no matter how small the repair. When septic system inspectors have been doing inspections for real estate transfers, or municipal officials granting various permits, it has been noted that some houses have garbage disposal systems or basement bathrooms with ejector pumps installed when their plans were not designed and approved for such. Their permit would then be considered void, and have to be resubmitted indicating the presence of a garbage disposal system or ejector pump. The permit application would also have to be revised as there are certain requirements if a garbage disposal system or ejector pump is installed.

A copy of every septic application submitted and approved by SCHD is forwarded to each municipality. If there is a garbage disposal or ejector pump to be installed the size of the disposal bed must then be increased by 50%, and their septic tank must be dual compartment tank with a 50% increase in capacity. I have attached excerpts from the code for your reference. If you wish to obtain a complete copy, please email me and I will forward you a PDF version of the regulations.

We are asking the housing and construction officials to make note of this when doing their inspections for certificates of occupancy etc. The plans need to indicate whether or not they were approved to accommodate a garbage disposal system or ejector pump. If the application was approved for no garbage disposal or ejector pump and the inspector finds one, the septic system and application will then be null and void. SCHD would ask that the inspector notify our department by phone as soon as possible. The applicant must then upgrade the size of their disposal bed as well as the size of their tank. SCHD asks you to take this information into consideration to assist our department make sure systems are adequately servicing the residence for which they were designed. SCHD is taking measures to evaluate properties when doing repair inspections, but your help on reviewing new constructions for this issue would greatly be appreciated. If you have any questions or concerns feel free to give me a call at 856-935-7510 ext 8484.

Respectfully,

A handwritten signature in black ink, appearing to read "Matthew J. Olejarski".

Matthew J. Olejarski
Salem County Health Department, Environmental Division
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- (f) The minimum requirements for construction, materials and foundations of grease traps shall be the same as those required for septic tanks, as prescribed in N.J.A.C. 7:9A-8.2.
- (g) The inlet and outlet of the grease trap shall be provided with "T" baffles extending to a depth of 12 inches above the tank floor and well above the liquid level.
- (h) To facilitate maintenance, manholes extending to finished grade shall be provided. Covers shall be of gas-tight construction and shall be designed to withstand expected loads and prevent access by children.
- (i) High strength wastewater pretreatment components shall be approved by the administrative authority only if the components are designed, constructed and certified by a septic system designer to actively treat and therefore reduce fats, oils and grease, total suspended solids, biochemical oxygen demand and chemical oxygen demand. The components shall be designed to meet the following effluent criteria:

<u>Constituent</u>	<u>Concentration (mg/L)</u>
Total suspended solids (TSS)	155
Five-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 high strength wastewater pretreatment 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 systems except as provided at N.J.A.C. 7:9A-8.3.
- (b) The minimum capacity of the septic tank shall be determined in accordance with the following criteria:
 1. When serving single family dwelling units, septic tanks shall have the minimum capacity of 250 gallons per bedroom. Expansion attics shall be considered additional bedrooms. In no case shall the capacity be less than 1000 gallons.
 2. When serving installations other than single family dwelling units, the minimum capacity shall be 1.5 times (150 percent) the volume of sanitary sewage, Q, when Q, determined as prescribed in N.J.A.C. 7:9A-7.4, is less than 1,500 gallons per day. When Q is greater than 1,500 gallons per day, the minimum capacity in gallons shall be 1,125 plus 0.75Q. In no case shall the capacity be less than 1000 gallons.
 3. Two or more septic tanks may be connected in series in order to obtain the minimum required liquid capacity providing that each tank is at least as large as the succeeding tank. When a multiple compartment tank is used, the requirements of (d)3 below shall be satisfied.

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- (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) Multiple compartment septic tanks shall be required for institutional and commercial installations where the daily volume of sewage determined as prescribed in N.J.A.C. 7:9A-7.4 is greater than 1,000 gallons or when sewage is conveyed from the building served to the septic tank by means of a sewage ejector pump. When multiple compartment tanks are used the following shall be required:
1. The total capacity of multiple compartment tanks shall not be less than 1000 gallons. The first compartment shall have a liquid capacity of two-thirds the total required liquid capacity determined as prescribed in (b) above.
 2. Not more than two compartments shall be provided in tanks having liquid capacities of less than 1250 gallons. Tanks having liquid capacities of over 1250 gallons may be provided with more than two compartments.
 3. Multiple compartments may be provided by partitions within a single tank as shown in Figure 11 of Appendix A, or by connecting individual tanks in series. When a single partitioned tank is used, vent holes shall be provided near the top of each partition to allow free exchange of evolved gases between compartments and the two compartments shall be connected by means of a pipe tee, baffle or septic solids retainer, as shown in Figure 11.
- (e) Septic tanks shall be designed and constructed according to the following requirements:
1. Septic tanks shall be water-tight and constructed of sound and durable materials which are resistant to corrosion, decay, frost damage or to cracking or buckling due to settlement or backfilling. All joints below the liquid level of the tank or below the seasonally high water table shall be provided with a permanent water-tight seal.
 2. Covers shall be designed and constructed so as not to be damaged by any load which is likely to be placed on them. Precast slabs used as covers shall be water-tight, a minimum of three inches in thickness and adequately reinforced.
 3. The walls and base of poured-in-place concrete tanks shall not be less than six inches in thickness. The sides and bottom of precast concrete tanks shall be a minimum of three inches in thickness and shall be adequately reinforced.
 4. Concrete used in the construction of septic tanks shall conform to the American Concrete Institute (ACI) standards for frost resistance (ACI 318-16-4.5.1) and water-tightness (ACI 318-16-4.5.2). In the case of built-in-place tanks, certification that these standards have been met shall be provided by the design engineer and the certification shall be signed, sealed and attached to the approved engineering design. In the case of precast tanks, certification shall be provided by the manufacturer and the certification displayed on the tank.
 5. All inside concrete surfaces shall be sealed with two coatings of an appropriate inert coating to minimize corrosion. Coating of pre-cast tanks shall be applied by the manufacturer prior to delivery to the job site.
 6. The base of poured-in-place tanks shall be cast in one piece and shall extend beyond the side and end walls of the tank. Such tanks shall not be emplaced until 48 hours after the base has been poured.
 7. Pre-fabricated polyethylene septic tanks shall conform with the standards for materials, wall thickness, fastening of fittings and maximum deformation under load as prescribed by the Canadian Standards Association in CSA Standard CAN3-B66-M79.
 8. Pre-fabricated fiberglass septic tanks shall conform to ASTM Standard D4021.
- (f) A pre-fabricated septic tank constructed of any material which may be floated or shifted by water or ground cave-in shall be filled with water immediately after it is set in its proper position. When a septic tank is installed

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>0.6-2	<30-45	2.56
>0.2-0.6	<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 (in/hr)	Percolation Rate (min/in)	Trench Width (ft)	Adjusted L/Q^1 (ft/gal per day)			
			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 (ft²/gal per day) WITH AN ADVANCED WASTEWATER PRETREATMENT DEVICE

Permeability (in/hr)	Percolation Rate (min/in)	Adjusted A/Q^1 (ft ² /gpd)
>6-20	<3-15	1.233
>2-6	<15-30	1.704
>0.6-2	<30-45	2.190
>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 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: