

## **16-12 INDIVIDUAL SEWAGE DISPOSAL CODE OF HOPEWELL TOWNSHIP.**

- a. Purpose. Due to the environmental characteristics of Hopewell Township, the board of health developed this ordinance in 1978 to address the widespread use of onsite sewage disposal systems and water supply wells. Onsite sewage disposal systems may constitute a potential source of pollution of ground and surface waters, resulting in contamination of potable water supplies, foul odors, nuisance problems and may pose other hazards to public health. It is determined to be in the interest of public health, safety and welfare to develop an ordinance to provide site specific requirements in the conducting of soil testing, specifying lot area, restricting system locations and providing additional design and installation requirements for onsite sewage disposal systems in Hopewell Township. These requirements are in addition to N.J.A.C. 7:9A (Adopted by reference as Ordinance 16-3 on 7/16/1990).

### **16-12.1 Definitions.** As used in this section, the following shall have the meanings indicated:

- a. "*Aerobic or aeration waste treatment system*" shall mean any individual sewage treatment system which contains or incorporates, as part of the treatment process, a manner of introducing air and oxygen into the sewage held in such systems so as to provide aerobic biochemical stabilization during a detention period and prior to its discharge to any subsurface absorption area.
- b. "*Owner*" shall mean any person, individual, partnership, corporation or other type of business association who shall either own, reside upon, lease or operate any premises upon which is located any aerobic or aeration waste treatment system.
- c. "*Bedroom*" shall mean any room within a dwelling that might reasonably be used as a sleeping room including, but not limited to, rooms designated as a den, office, or study.
- d. "*Installer*" shall mean any person who installs or is in the business of installing or excavating for a household sewage disposal system or part thereof and is licensed by the board of health.

### **16-12.2 Alternative Onsite Sewage System Standards.**

- a. *Aerobic Sewage Treatment Systems.* If an individual subsurface disposal system design is submitted for approval and the design contains or has as a principal operating part thereof an aerobic or aeration type waste treatment system, the board of health may approve such design, but only under the terms and conditions as contained in this subsection and N.J.A.C. 7-9A.
  1. Aerobic sewage treatment tanks shall not be approved unless the tank has been found by the administrative authority to be in conformance with the National Sanitation Foundation Standard No. 40, dated November 13, 1970 as amended. Aerobic sewage treatment tanks tested and approved by the National Sanitation Foundation (N.S.F.) need only bear the N.S.F. seal as proof of complete testing procedures and results. Manufacturers, retailers, or other persons seeking approval of such tanks under this section shall either submit sufficient proof of possession of the N.S.F. seal or shall submit to the board of health for its approval two certified copies of complete testing procedures and results conducted by a testing agency that shall have received the prior approval of the board of health certifying that the tank(s), by model number, conforms with the National Sanitation Foundation Standard No. 40, as amended.

2. Every aerobic sewage treatment tank shall be equipped with a visual and audible alarm system which shall be designed to respond to any electrical or mechanical failure or malfunction of the tank or any component thereof.
3. The total holding capacity of an aeration tank shall be a minimum of 1,000 gallons. The aeration compartment shall have a minimum holding capacity of 500 gallons or 200 gallons for the first bedroom and 150 gallons for each additional bedroom whichever is larger.
4. The shape and design of the tank inlet and outlet arrangements, compartmentation, baffling, and air application shall be designed so as to (a) allow for intimate mixing of the applied oxygen; (b) prevent excessive short circuiting of flow; (c) prevent the deposition of solids in any portion of the compartment; and (d) prevent excessive accumulation of foam anywhere in the system.
5. The method of aeration shall be accomplished by mechanical aeration, diffused air, or a combination of these. The air may be applied continuously or intermittently and shall maintain aerobic conditions in the aeration and settling compartments at all times. On all systems where the operation is intermittent, the cycling mechanism is to be sealed or devised so that the cycle cannot be altered by the owner.
6. The standards for construction and installation of septic tanks, distribution boxes, connecting pipe and disposal fields will be as presented in the Individual Sewage Disposal Code of New Jersey, N.J.A.C. 7:9A
7. Maintenance and operation.
  - (a) Service and inspection for certain individual waste treatment systems. No approval or permit shall be issued for the construction, alteration, modification, installation or utilization of any individual sewage treatment system, which shall contain or have as a principal operating part thereof an aerobic or aeration waste treatment unit of a type approved by the board of health, unless, as a condition of such approval and the issuance of such permit, the owner of the premises shall at all times keep in force and effect an annual service and inspection contract or policy in a form acceptable to the board with an individual or company licensed by the board of health for installation, inspection, service and maintenance of the aerobic or aeration waste treatment system.
  - (b) Provisions applicable to existing systems. The provisions of subsection 16-12.2a,7(a) regarding the annual service and inspection contract or policy shall also apply to owners of any existing or previously constructed, altered, modified or installed individual sewage treatment system, which contains or has as a principal operating part thereof such an aerobic or aeration waste treatment unit.
8. Term and expiration of contract; renewal date.
  - (a) All such service and inspection contracts or policies shall run from April 1 of each year through March 31 of each year. Any contracts or policies issued after April 1 of each year may be issued on a pro rata basis for the unexpired period of such year. Copies of new or renewal contracts or

policies shall be filed with the board of health prior to March 15 of each year.

- (b) Nothing herein contained shall be deemed to limit the terms of the service and inspection contracts or policies to one year, but all such contracts or policies shall expire on March 31 of the last year provided therein.
9. Inspections, filing of results. All service and inspection contracts shall provide that such aerobic or aeration waste treatment units shall be inspected within the first ten days of operation and not less than once every three months pursuant to the initial operation. Copies of the results of the inspections acceptable by the board of health, shall be filed with the board by the licensed person or company conducting the inspection within ten days thereof.
  10. Qualifications and regulation of issuer of contract. The board of health reserves the right to inquire into the qualifications of aerobic and aeration waste treatment installer or any issuer of the service and inspection contracts or policies and will license or regulate the individuals or companies or as may otherwise be provided by law.

b. *Holding Tanks.*

1. The board of health shall allow holding tanks for use only in accordance with N.J.A.C. 7:9a-3.4c and 3.12. The use of holding tanks shall be allowed only after a detailed written analysis has been submitted to the board of health analyzing other possible methods of disposal and reasons why they are not acceptable. Holding tank systems designed to accommodate flows greater than 2,000 gallons per day must be reviewed and approved by NJDEP.
2. The tank shall be a closed, sealed unit and shall be of reinforced concrete or other N.S.F. approved material. The tank shall have only one inlet. Accommodations for pumping the holding tanks shall be designed to prevent spillage and control odor.
3. Capacity. In no case shall the holding tank be less than 5,000 gallons. The minimum capacity of the tank shall be for a two-week period based upon acceptable engineering criteria. Overflow holding tanks on repairs or alterations may be initially allowed at less than the required design rates above.
4. The tank shall be equipped with both visible and audio alarm systems indicating high water levels. The tank shall also have a gauge indicating liquid level. The alarm system shall be connected to a solenoid valve, which will close the water supply to the dwelling or structure when the alarm system is activated. Aeration may be required.
5. Contract for removal of wastes. Prior to the issuance of a permit to install a holding tank the applicant shall submit, to the board, a contract with an approved contractor to dispose of the wastes from the holding tank and a contract from an approved disposal site operator authorizing the contractor to dispose of the wastes for the same period of time as the contract. The annual contract shall indicate the proposed disposal area of the wastes, length of time that the contract is in effect, the time interval between removal of wastes, and the name of the contractor.

6. The annual service and inspection contract or policy shall also apply to owners of any existing or previously constructed, altered, modified or installed individual sewage treatment system, which contains a holding tank.
- c. *Deed Notification, Advisory of Alternative System.* When any residential or commercial property is provided with a holding tank, aerobic waste water treatment system or any other alternative waste water system approved by NJDEP as part of the on-site waste water disposal plan, the deed for the property shall be amended and filed with the county clerk. It must indicate the utilization of either component and include whatever requirements may have been imposed by the board of health or NJDEP on the owner. This shall be done to alert all future owners. The amendment must clearly state that this provision cannot be removed without the written authorization of the health department.

### 16-12.3 Lot Area Requirements.

- a. In addition to meeting the requirements for minimum lot size set forth in the land use and development ordinance in effect at the time of approval, lot area required for on-site sewage disposal systems and water supply wells shall meet the net square footage or acreage requirements as indicated in Table One. Net lot acreage for on-site sewage disposal systems and water supply wells shall consist of that portion of the property where the realty improvements, including the buildings and any accessory structures and the well and sewage disposal systems are located. Minimum lot acreage must be contiguous acreage which does not contain any utility or conservation easements, and which is located outside of any watercourses, wetlands, wetlands buffers, State open waters, or areas of steep slopes (see N.J.A.C. 7:9A-4.4 Slopes, which defines slopes as follows "(a) The disposal field or seepage pit shall not be located in an area where the slope is greater than 25%. (b) Where the slope is greater than 10%, no disposal field or seepage pit shall be placed less than 50 feet upslope of any bedrock outcrop where signs of ground water seepage can be detected. (c) Modification of slopes by regrading shall meet the requirements of N.J.A.C. 7:9A-10.3(b)"). Further, any areas of land restricted against development by State, Federal or local approvals shall be excluded from the net lot area necessary for onsite sewage disposal systems and water supply wells. Minimum net lot area for various types of disposal systems is set forth in Table One below.

**Table One: On-site Individual Systems Lot Area & Design Criteria**

<i>Type of Disposal System Design</i>	<i>Minimum Net Lot Area</i>
Conventional	1 acre (40,000 sq. ft.)
Conventional/Soil Replacement	1 acre (40,000 sq. ft.)
Water Conservation System with DEP Approval and/or Grey/Black Water Systems	2 acres (80,000 sq. ft.)
Mounded Systems, Mounded Soil Replacement, Mounded Fill Enclosed (Shallow Groundwater and/or Bedrock)	2 acres (80,000 sq. ft.)
Innovative Designs Meeting Individual NJDEP Approval	5 acres (220,000 sq. ft.)

- b. *Waivers for Reduction of Lot Area for Preexisting Lots:*
  - 1. Approval of on-site disposal systems on existing lots with less than the minimum net lot area will only be considered by the board if the waiver being requested is for not less than 80 percent of the net area requirements from Table One. The applicant must seek approval of the zoning board of adjustment, only after receiving conditional approval for the design from the board of health. The board of health will review the design to assure it meets all other township and NJDEP site and technical design conditions.
  - 2. Applicant must present proof that additional land is not available for purchase at fair market value to increase net lot area. Adjoining lots under common ownership or family ownership are to be considered as one parcel and must be consolidated.
- c. *Potable Water Supply.* In areas within or close to an area of known microbiological or chemical contamination of ground water, the board of health may require an alternative water supply or public water if an on-site safe water supply cannot be assured.

**16-12.4 Engineering Data Design.** In order for the board of health to properly review individual disposal systems, the engineer preparing the disposal plan shall submit or include the minimum as follows:

- a. *Disposal and Tank Design Sizing Requirements.*
  - 1. All systems disposal field design must incorporate a 25 percent increase over the State disposal system design rate.
  - 2. Depth of disposal system shall be excavated to depth of deepest soil test used to determine zone of disposal.
  - 3. Septic tanks shall provide 250 gallons additional volume more than State design or contain two compartments.
  - 4. When garbage disposals are installed or proposed, two septic tanks in series are required in addition to an additional 25 percent increase in the disposal field size per subsection 16-12.4a.1.
  - 5. When sewage ejectors are required to lift sewage up to the septic tank, a multiple compartment septic tank system having a capacity of 50 percent greater than that required in subsection 16-12.4a.3 above shall be installed. Alternatively, an additional two-compartment tank may be installed to accept the effluent solely from the sewage ejector prior to connecting into the septic pump tank or disposal field.
- b. *Design Submittal Requirements.*
  - 1. Lot elevations in the disposal area showing proposed elevation of disposal trenches or beds, septic tank or distribution box, bottom elevations, ground elevations, proposed and existing in one foot contours.
  - 2. Provide proposed lot grading in the disposal area. A minimum design slope of 5:1 shall be required for mounded or built up systems.
  - 3. Proposed means to control surface, driveway, and sump pump discharge, basement drains and road runoff from entering disposal area. Swales, berms and/or lawn inlets

must be considered in directing surface water away from mound and conventional systems. All drain pipes, swales or water diversions must not adversely impact adjoining properties, waterways or wetlands or cause standing water. Connection into storm water system and/or drainage basins may be required and must be also approved by the township engineer and shown on the site grading plan.

4. Average seasonal high water table as related directly to lot elevations.
5. Soil log and soil classifications to a depth of ten feet or to bedrock when encountered, but a minimum of six feet below original grade and eight feet below the level of infiltration. All soil profile pits and corresponding soil logs, both acceptable and unacceptable, within 100 feet of the proposed disposal field must be shown.
6. Cross-sections of the proposed bed showing changes in grade across the beds and shallow and deep inspection ports and distribution line locations, etc.
7. Location of soil log and percolation tests and other approved soil tests (acceptable and unacceptable). All complete, incomplete with explanation, and unacceptable. All acceptable soil logs shall be marked with a durable permanent marker four feet in height and accurately located. PVC pipe is not acceptable.
8. Location of existing wells and septic fields on adjacent lots within 200 feet of proposed or existing wells and septic fields on lot in question.
9. Location of streams, stream corridors, water courses, steep slopes, fresh water wetlands and associated buffers and all other conservation easements or flood plains within 100 feet of disposal system.
10. Submit an as-built drawing of the installed system with the engineer's certification that the installed system complies with the approved design. (Certificate of Compliance with Section B completed).
11. All designs and as-built drawings shall be submitted on 8.5" x 11" or 14" size sheets only.
12. Reserved.
13. All septic tanks (new and repaired or replaced) shall be provided with cast iron locking manholes raised to grade to facilitate pumping and inspections.
14. Water meters with remote reading units shall be installed in all nonresidential properties.

#### **16-12.5 Soil Test and Site Evaluation Data.**

- a. *General.* It shall be the requirement that each lot to be approved for subdivision, site plan or dwelling construction have two acceptable adjoining areas within 50 feet of each other for the construction of a primary and reserve area for onsite sewage systems. Primary and reserve soil tests and profile pits are required in both areas. All soil testing must be witnessed by a representative of the board of health.
- b. *Requirements.*
  1. Each proposed lot shall have a minimum of two acceptable soil profile pits, series of soil permeability tests or basin flood tests performed in the proposed primary disposal area as required by the administrative authority, either in the field or after a review of the submitted soil test data. The soil profile pits shall be conducted as specified in N.J.A.C. 7:9A.

2. Soil tests shall be conducted within the layer of soil or rock fracture zone as determined from the recorded profile pit soil log. Tests shall be conducted at the depth at which seepage is encountered or where doubt exists regarding the presence or the type of a limiting zone and/or permeability. Testing shall be conducted at various depths (not less than 24 inches vertical separation) to demonstrate a suitable zone of disposal of 48 inches above massive bedrock/refusal as recorded in soil logs. A minimum of four feet to an impervious zone is required.
3. An additional set or series of soil permeability tests or basin flood tests and a minimum of two profile pits are required meeting the same criteria as those conducted for the primary disposal systems in a reserve area for future sewage system installations.
4. Multiple soil evaluation testing requirements in areas of severe to moderate severe soils. If more than five unacceptable soil tests or profile pits are recorded within 50 feet of the proposed disposal areas a duplicate soil profile pit or soil permeability test, pit bail or basin flood must be conducted for each passing log or test and not less than 25 feet from the passing test or log.

**16-12.6 Location of Systems.** All individual sewage disposal systems referred to herein shall be located entirely within the limits of a single tax lot, upon which the improvements being serviced by said system shall be located. If more than one tax lot is used, a consolidation is required.

- a. Soil profile pits and soil tests shall be a minimum of 30 feet from any property line, conservation areas and all other environmental easements for conventional system built below original grade. Soil profile pits, logs and soil tests for all systems required to be built above existing grade shall be located a minimum of 50 feet to lot lines, water courses, conservation areas and all other environmental easements. In both cases, additional distance for required grading and/or environmentally sensitive concerns such as the height of mounds and associated swales or berms, excessively coarse soils or fractured bedrock and high water tables, etc., may still be required by the health department.
- b. Soil logs and tests shall be a minimum of 50 feet to the uppermost elevation of easement boundary, water courses, flood plains, detention basins, wetlands, etc. If fast perc rates (less than 15 min./inch), or K Values greater than 20 inches per hour, high water table or coarse soil types are encountered, this distance must be increased to 100 feet.

**16-12.7 Permits.**

- a. Applications for onsite sewage disposal systems shall be made to the board of health on the approved township application form. (Paper size of 8.5" by either 11" or 14")
- b. Application fees shall be as submitted in accordance with those specified in Chapter X.
- c. Permits shall be valid for a period of two years from the date of issue. Two one-year extensions may be granted by the board of health.
- d. Permits are not automatically transferable upon sale of the property. The new property owner may reapply for a transfer of the original permit without any changes. The transferred permit would run for the remaining period of the original permit and if necessary the applicant would also be entitled to receive both one-year extensions if not already exhausted.

- e. A transfer fee and/or a request for a one-year extension fee shall be paid as specified in Chapter X.
- f. Resubmission of a new or revised sewage disposal system design by an applicant after the original permit has been issued and/or after the original permit has expired will be considered a "new" application and the application fee will be as specified in Chapter X.

**16-12.8 Onsite Waste Water Data Collection.**

- a. When permits are issued for new onsite sewage disposal systems or alterations of disposal systems on existing developed lots, the health department shall enter the property into the Hopewell Township onsite waste water disposal database. Upon receipt of the certificate of compliance and as-built drawing, care and maintenance manual of onsite septic and well water systems informational packet will be sent to the owner, with additional reminders every three years thereafter.

**16-12.9 Prior Existing Tests and Permits.**

- a. Properties with existing soil tests and soil profile pits conducted prior to September 7, 2000, may be utilized until December 31, 2003 for the purpose of securing permits for the construction of an onsite sewage disposal system, provided such tests and soil profile pits were conducted in accordance with the requirements of subsection 16-12.5, Soil Test Data, and subsection 16-12.6, Locations of Systems, that were in effect immediately prior to the adoption of Ordinance #2000-1 on September 7, 2000. In designing an onsite sewage disposal system, in accordance with the provisions of this section, the engineer preparing the sewage disposal plan must address and meet the Engineering Data Design criteria that are in effect following the adoption of Ordinance No. 2000-1 on September 7, 2000, as set forth in subsection 16-12.4, Engineering Design Criteria. Permits issued pursuant to the provisions of this section shall be valid for a period of two years from the date of their issuance. Revisions or changes to the design constitute a new application and must meet the requirements in place at that time.

**16-12.10 Effective Date.** This ordinance shall take effect upon final adoption and publication in accordance with law.