

Environmental

Health

RULES & REGULATIONS

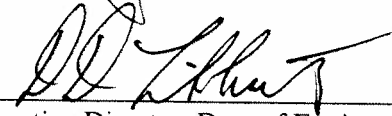
ON-SITE WASTEWATER TREATMENT SYSTEM  
REGULATIONS



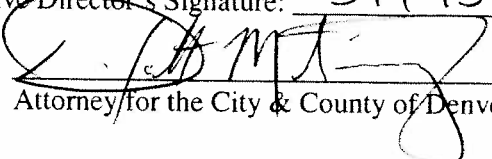
Approvals

  
Chair, Board Of Environmental Health

Adopted

  
Executive Director, Dept of Environmental Health

Date of Executive Director's Signature: 5-14-15

  
Attorney for the City & County of Denver

**City and County of Denver**  
**ON-SITE WASTEWATER TREATMENT SYSTEM**  
**Regulations**

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**BOARD OF ENVIRONMENTAL HEALTH  
RULES AND REGULATIONS GOVERNING ON-SITE WASTEWATER TREATMENT  
SYSTEM**

\_\_\_\_\_, 2015

**SECTION 1.0 INTRODUCTION**

1.1 Title

These requirements shall be known as the City and County of Denver On-Site Wastewater Treatment System (OWTS) regulations.

1.2 Authority

These requirements are adopted by the City and County of Denver Board of Environmental Health (hereinafter the “Board”) and promulgated by the Executive Director of the Department of Environmental Health (hereinafter the “Department”) in accordance with the authority in Article II, Part 12 of the City and County of Denver Charter and in Chapter 24, Article II of the Denver Revised Municipal Code (DRMC), and pursuant to the regulation and requirements of the On-Site Wastewater Treatment System Act, 25-10-101, et seq. C.R.S.

1.3 Scope and Purpose

The purpose of these regulations is to establish the minimum standards for the location, design, construction, performance, installation, alteration and use of OWTS with a design capacity less than 2,000 gallons per day.

1.4 Applicability

- A. These regulations apply to all OWTS within the municipal limits of the City and County of Denver.
- B. In addition to these regulations, other regulations and requirements may be applicable to OWTS including, but not limited to, Buildings and Building Regulations (DRMC Chapter 10), Health and Sanitation (DRMC Chapter 24), Landmark Preservation (DRMC Chapter 30), Utilities (DRMC Chapter 56), and Zoning (DRMC Chapter 59).

1.5 Severability

Should any section, clause, or provision of these regulations be declared by a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the regulations as a whole, or any part thereof other than the part declared to be invalid.

## SECTION 2.0 DEFINITIONS

Except as noted below, words and phrases shall have the meaning assigned by the Charter and Ordinances of the City and County of Denver. As used in these Rules, the following terms shall have the following meanings:

- 2.1 “*Applicant*” means a person who submits an application for a permit for an On-Site Wastewater Treatment System.
- 2.2 “*Bed*” means a below-grade soil treatment area consisting of a shallow excavation greater than three feet wide containing distribution media and more than one lateral.
- 2.3 “*Board*” means the City and County of Denver Board of Environmental Health.
- 2.4 “*Cesspool*” means an unlined or partially lined underground pit or underground perforated receptacle into which raw household wastewater is discharged and from which the liquid seeps into the surrounding soil. Cesspool does not include a septic tank.
- 2.5 “*Cleaning*” means the act of removing septage or other wastes from a wastewater treatment system component.
- 2.6 “*Commission*” means the Colorado Water Quality Control Commission created by section 25-8-201, C.R.S.
- 2.7 “*Composting toilet*” means self-contained waterless toilet designed to decompose non-water-carried human wastes through microbial action and store the resulting matter for disposal.
- 2.8 “*Department*” means the City and County of Denver Department of Environmental Health.
- 2.9 “*Design*” means 1. the process of selecting, sizing, locating, specifying, and configuring treatment train components that match site characteristics and facility use as well as creating the associated written documentation; and 2. written documentation of size, location, specification and configuration of a system.
- 2.10 “*Design capacity*” refers to system capacity, which is related to the estimated wastewater volume per unit of time, typically in gallons per day. See Flow, design.
- 2.11 “*Design flow*” See Flow, design.
- 2.12 “*Division*” means the Water Quality Control Division of the Colorado Department of Public Health and Environment.
- 2.13 “*Domestic wastewater*” See Wastewater, domestic.
- 2.14 “*Domestic Wastewater Treatment Works*” means a system or facility for treating, neutralizing, stabilizing, or disposing of domestic wastewater which has a designed capacity to receive 2,000 gallons of domestic wastewater per day or more. The term "domestic wastewater treatment works" also includes appurtenances to such system or facility such as outfall sewers and pumping stations and to equipment related to such appurtenances. The term "domestic wastewater treatment works" does not

include industrial wastewater treatment plants or complexes whose primary function is the treatment of industrial wastes, notwithstanding the fact that human wastes generated incidentally to the industrial process are treated therein.

- 2.15 “*Effluent*” means the liquid flowing out of a component or device of an On-Site Wastewater Treatment System.
- 2.16 “*Floodplain (100-year)*” means an area adjacent to a stream which is subject to flooding as the result of the occurrence of a one hundred (100) year flood, and is so adverse to past, current or foreseeable construction or land use as to constitute a significant hazard to public or environmental health and safety or to property or is designated by the Federal Emergency Management Agency (FEMA) or National Flood Insurance Program (NFIP). In the absence of FEMA/NFIP maps, a professional engineer shall certify the flood plain elevations.
- 2.17 “*Floodway*” means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot or as designated by the Federal Emergency Management Agency or National Flood Insurance Program. In the absence of FEMA/NFIP maps, a professional engineer shall certify the floodway elevation and location.
- 2.18 “*Flow, design*” means the estimated volume of wastewater per unit of time for which a component or system is designed. Design flow may be given in the estimated volume per unit such as person per unit time that shall be multiplied by the maximum number of units that a facility can accommodate over that time.
- 2.19 “*Ground water*” means that part of the subsurface water that is at or below the saturated zone.
- 2.20 “*Guidelines*” means State Board of Health Guidelines on Individual Sewage Disposal Systems, 5 CCR 1003-6 – predecessor of Regulation 43, On-Site Wastewater Treatment System Regulation, 5 CCR 1002-43.
- 2.21 “*Higher level treatment*” means designated treatment levels other than treatment level 1.
- 2.22 “*Individual Sewage Disposal System*” means a term used for On-Site Wastewater Treatment System in Colorado regulations from 1973 until 2013.
- 2.23 “*Local board of health*” means the City and County of Denver Board of Environmental Health.
- 2.24 “*Local health department*” means the City and County of Denver Department of Environmental Health.
- 2.25 “*Local public health agency*” means the City and County of Denver Department of Environmental Health.
- 2.26 “*On-Site Wastewater Treatment System*” or “*OWTS*” and, where the context so indicates, the term “*system*” means an absorption system of any size or flow or a system or facility for treating, neutralizing, stabilizing, or dispersing sewage

generated in the vicinity, which system is not a part of or connected to a sewage treatment works.

- 2.27 “*OWTS Act*” means the On-Site Wastewater Treatment System Act, 25-10-101, et seq. C.R.S.
- 2.28 “*Permit*” means a permit issued pursuant to these regulations for the construction or alteration, installation, and use or for the repair of an On-Site Wastewater Treatment System.
- 2.29 “*Person*” means an individual, partnership, firm, corporation, association, or other legal entity and also the state, any political subdivision thereof, or other governmental entity.
- 2.30 “*Privy*” means an above grade structure allowing for the disposal of excreta not transported by a sewer and which provides privacy and shelter and prevents access to the excreta by flies, rodents, or other vectors.
- 2.31 “*Pit privy*” means a privy over an unlined excavation.
- 2.32 “*Vault privy*” means a privy over a vault.
- 2.33 “*Septage*” means a liquid or semisolid that includes normal household wastes, human excreta, and animal or vegetable matter in suspension or solution generated from a residential septic tank system. Septage does not include chemical toilet residue.
- 2.34 “*Septic tank*” means a watertight, accessible, covered receptacle designed and constructed to receive sewage from a building sewer, settle solids from the liquid, digest organic matter, store digested solids through a period of retention, and allow the clarified liquids to discharge to other treatment units for final disposal.
- 2.35 “*Sewage*” means a combination of liquid wastes that may include chemicals, house wastes, human excreta, animal or vegetable matter in suspension or solution, and other solids in suspension or solution, and that is discharged from a dwelling, building, or other establishment. See also Wastewater.
- 2.36 “*Sewage treatment works*” has the same meaning as “domestic wastewater treatment works”.
- 2.37 “*Slit trench latrine*” means a temporary shallow trench for use as disposal of non-water-carried human waste.
- 2.38 “*Soil*” means 1. unconsolidated mineral and/or organic material on the immediate surface of the earth that serves as a medium for the growth of plants and can potentially treat wastewater effluent; 2. unconsolidated mineral or organic matter on the surface of the earth that has been subjected to and shows effects of: a) pedogenic and environmental factors of climate (including water and temperature effects) and b) macro and microorganisms, conditioned by relief, acting on parent material over a period of time.
- 2.39 “*Soil evaluation*” means a percolation test, soil profile, or other subsurface soil analysis at the depth of a proposed soil treatment area or similar component or system to determine the water absorption capability of the soil, the results of which

are normally expressed as the rate at which one inch of water is absorbed or as an application rate of gallons per square foot per day.

- 2.40 “*Soil treatment area*” means the physical location where final treatment and dispersal of effluent occurs. Soil treatment area includes drain fields and drip fields.
- 2.41 “*Systems cleaner*” means a person engaged in and who holds himself or herself out as a specialist in the cleaning and pumping of On-Site Wastewater Treatment Systems and removal of the residues deposited in the operation thereof.
- 2.42 “*Systems contractor*” means a person engaged in and who holds himself or herself out as a specialist in the installation, renovation, and repair of On-Site Wastewater Treatment Systems.
- 2.43 “*Transfer of Title*” means change of ownership of a property.
- 2.44 “*Treatment level*” means defined concentrations of pollutants to be achieved by a component or series of components of an OWTS.
- 2.45 “*Vault*” means a watertight, covered receptacle, which is designed to receive and store excreta or wastes either from a building sewer or from a privy and is accessible for the periodic removal of its contents. If the vault is intended to serve a structure or structures that are projected to generate a domestic wastewater flow of two thousand gallons per day or more at full occupancy, the vault is a domestic wastewater treatment works. Vaults are On-Site Wastewater Treatment Systems.
- 2.46 “*Wastewater, domestic*” means combination of liquid wastes (sewage) which may include chemicals, household wastes, human excreta, animal or vegetable matter in suspension or solution, or other solids in suspension or solution which are discharged from a dwelling, building or other structure.
- 2.47 “*Wastewater pond*” means a designed pond which receives exclusively domestic wastewater from a septic tank and which provides an additional degree of treatment.
- 2.48 “*Water Quality Control Commission*” See Commission.
- 2.49 “*Water Quality Control Division*” See Division.

### **SECTION 3.0 GENERAL REQUIREMENTS AND PROHIBITIONS**

#### **3.1 General Requirements**

A permit shall be required for any OWTS, including an OWTS in existence prior to the effective date of these regulations.

#### **3.2 General Prohibitions**

A. Construction and installation of a new OWTS is prohibited, except for such systems that are granted a variance from the Board of Environmental Health. See Section 9.0, Variances, for conditions under which a variance request will be considered by the Board.



- B. No existing OWTS shall be altered or repaired prior to the issuance of a permit by the Department.
- C. The Department shall not issue permits for construction of new cesspools, pit privies, or slit trench latrines.

3.3 Prohibition of OWTS Where Public Sewer Service is Available and Feasible

No permit shall be issued to any person for construction or installation of a new OWTS or repair or replacement of an existing OWTS when the subject property is situated within the city and abutting on any street or alley in which there is now located a public sewer of the city.

3.4 Prohibition of OWTS for Multi-Family and Business Commercial, Industrial, and Institutional Uses

No permit shall be issued to any person for construction or installation of a new OWTS when the subject property is intended for use as a multi-family dwelling or commercial, industrial, or institutional purposes.

3.5 Prohibition of New OWTS in Floodplain Areas

- A. No permit shall be issued to any person for the construction or installation of new or replacement OWTS in a designated 100-year floodplain.
- B. Repairs of an existing OWTS, if allowed for continued use in a designated floodway, shall meet or exceed the requirements of the National Flood Insurance Program, as defined in 44 CFR, Subchapter B – Insurance and Hazard Mitigation, Criteria for Land Management and Use, 44 C.F.R. part 60. The system as approved by the Department shall be designed to minimize or eliminate infiltration of floodwaters into the system and discharge from the system into the floodwaters.

3.6 Prohibition of OWTS in Unsuitable Areas

No permit shall be issued to any person where, in the Executive Director's judgment, construction and use of the OWTS would constitute a hazard to public health or water quality.

**SECTION 4.0 PERMITS, FEES AND LICENSING, AND ENFORCEMENT**

4.1 Permits

- A. Prior to installing, altering, expanding or repairing an OWTS, the applicant must obtain a permit from the Department.
- B. The permit application must include the minimum information identified below:
  - 1. Owner name and contact information
  - 2. Property address

3. Property legal description
  4. Type of permit
  5. Report from Site and Soil Evaluation
  6. System design with a legible, accurate site plan which shows pertinent physical features on subject property, and on adjacent properties.
  7. When specific evidence suggests undesirable soil conditions exist, additional hydrological, geological, engineering or other information provided by a professional engineer or geologist may be required to be submitted by the applicant.
- C. An OWTS permit expires one (1) year after the date of issuance if construction has not commenced. After expiration, a new application shall be required to begin construction.
- D. Any change in plans or specifications of the OWTS after the permit has been issued invalidates the permit unless the permittee receives written approval from the Department. After a permit is invalidated, a new application shall be required to begin construction.
- E. The Department will determine whether the information provided in the permit application, site and soil evaluations, assumptions and calculations, and design of the proposed OWTS are in compliance with the requirements of the OWTS Act and regulations adopted pursuant thereto. If the submittal is determined to be in compliance and all other required information is provided, authorization to begin installation may be given.
- F. For the purpose of inspecting and enforcing applicable regulations and the terms and conditions of any permit issued and investigating and responding to complaints, the Department is authorized to enter upon private property at reasonable times and upon reasonable notice for the purpose of determining whether or not an operating OWTS is functioning in compliance with the OWTS Act and applicable regulations adopted pursuant thereto and the terms and conditions of any permit issued and to inspect and conduct tests in evaluating any permit application. The owner or occupant of every property having an OWTS must permit the Department or its designee access to the property to make inspections, conduct required tests, take samples, and monitor compliance.
- G. Inspections
1. The owner or occupant of any property having an OWTS shall give the Department access to the property for the purpose of survey or inspection of the OWTS and all applicable system components.
  2. Before a new OWTS is placed in use, the owner, the owner's agent or the systems contractor must provide the Department with notice that the

progress of the work has been sufficiently completed to allow inspections to determine if all work has been performed in accordance with the permit requirements and to determine compliance of the system with these regulations.

3. The owner shall assure reasonable and safe access for the inspection of any excavation required in the installation of the permitted system.
4. The Department shall require inspections of the OWTS and all applicable system components prior to backfilling.
5. If during the installation of the OWTS an inspection reveals any material departure from the design of the permitted system or change in the proposed water supply, or if any aspect or component of the system fails to comply with these regulations, the Department shall provide the owner with written notice of the deficiencies.
6. If upon final inspection the Department finds the system is installed in accordance with these regulations and the permit conditions, the Department shall approve the completed system.
7. No OWTS shall be approved for use without a final inspection by the Department. Final approval of the permit by the Department must include, but is not limited to:
  - a. Receipt of letter from the engineer certifying construction of the system as designed, if engineer-designed;
  - b. Receipt of as-built drawing;
  - c. Final inspection prior to backfilling the system by the Department confirming that the OWTS was installed according to the permit requirements and regulations or variances to the regulations; and
  - d. Identification of system contractor.

#### 4.2 Repair Permits

- A. The owner or occupant of a property on which an OWTS is not in compliance must obtain a repair permit from the Department. The applicant must apply for a repair permit within two (2) business days after receiving notice from the Department that the system is not functioning in compliance with these regulations, or otherwise constitutes a nuisance or a hazard to public health or water quality.
- B. A repair permit will allow not more than 10 calendar days, unless a longer time period is approved by the Department, during which time the owner or occupant must make repairs. At the end of that period, the Department must inspect the system to ensure it is functioning properly.

- C. Concurrently with the issuance of a repair permit, the Department may issue an emergency use permit authorizing continued use of a malfunctioning system on an emergency basis for a period not to exceed the period stated in the repair permit. Such an emergency use permit may be extended, for good cause shown, in the event repairs may not be completed in the period stated in the repair permit through no fault of the owner or occupant and only if the owner or occupant will continue to make repairs to the system.

#### 4.3 Review of Denied Permit

If an OWTS application is denied by the Department, an applicant may request review by the Board.

- A. Any person receiving a Notice of Denial of an OWTS permit may appeal to the Board.
- B. An appeal is initiated by filing a petition for review within 30 days of receipt of the Notice of Denial.
- C. The Board will follow the appeals process as described in Rules Governing Hearings before the Board of Environmental Health.

#### 4.4 Fees

Permit fees and fees for other services and tests associated with OWTS will be set by the Board, in conformance with section 43.4(B)(4) and (5) of Regulation 43 and 25-10-107, C.R.S.

#### 4.5 Surcharge

Surcharge of \$23.00 will be collected for each permit issued by the Department. Of that fee, the Department will retain three (\$3.00) dollars to cover administrative costs and twenty (\$20.00) dollars will be transmitted to the state treasurer, in conformance with section 43.4(B)(5) of Regulation 43 and 25-10-107, C.R.S.

#### 4.6 Enforcement

##### A. Cease and Desist Orders

1. The Department may issue a written order to cease and desist from the use of any OWTS or sewage treatment works which is found by the Department or the Department's designated representative not to be functioning in compliance with these Regulations or is found to constitute a hazard to public health, or has not otherwise received timely repairs.
2. The order shall require that the owner or occupant bring the system into compliance or eliminate the health hazard within a reasonable period of time, or thereafter cease and desist from the use of the system.
3. A cease and desist order issued by the Department shall be reviewable by the Board upon a petition filed in conformance to the procedures detailed in Rules Governing Hearings before the Board of Environmental Health.

##### B. Penalties

Any person who violates any provision of these regulations may be subject to the assessment of civil penalties as defined in DRMC Section 24-5, Administrative Assessment of Civil Penalties.

## **SECTION 5.0 INCORPORATION BY REFERENCE OF SPECIFIC REQUIREMENTS OF REGULATION NO. 43, 5 CCR 1002-43**

With regard to those limited circumstances for which construction and installation of a new OWTS is allowed by the Board, the Colorado Water Quality Control Commission's "On-Site Wastewater Treatment System Regulation, Regulation 43, 5 CCR 1002-43," and applicable future revisions thereto, are made a part of these regulations. The following requirements shall apply as provided in Regulation 43 unless explicitly identified as an exception, exclusion, or extension of Regulation 43.

### 5.1 Section 43.5; Site and Soil Evaluation

#### A. General Applicability

1. With regard to Section 43.5.D.4.(6)(i), the Department does not identify special soil types nor require different percolation test procedures.

### 5.2 Section 43.6; Wastewater Flow and Strength

#### A. General Applicability

1. Only those requirements pertinent to Single-Family Residential Homes and Residential Wastewater Flows are applicable in these regulations.
2. A meter is required to measure flow into the facility or OWTS.
3. Residential Occupancy, for purposes of Single-Family Residential Design Flows, shall be as defined in Section 43.6.A.2., including Table 6-1.
4. Reductions in soil treatment area size or separation distances and wide beds for higher level treatment units are not allowed under these regulations. All designs must be based on Treatment Level (TL) 1 parameters.

#### B. Specific Exceptions

1. Table 6-2, Estimate of Average Daily Wastewater Flow and BOD Load Per Person, is applicable only to the extent that it pertains to Residential Wastewater.
2. Table 6-3, Treatment Levels, is applicable only for Treatment Level 1.

### 5.3 Section 43.7; Minimum Distances Between Components of an OWTS and Physical Features

- #### A. General Applicability – Only those requirements pertinent to TL 1 are applicable in these regulations.

- B. Area or separation distance reductions can only be allowed in the future if these regulations are amended to include a program of oversight for inspection and maintenance of higher level treatment units. Amended regulations must be approved by the Water Quality Control Division of the Colorado Department of Public Health and Environment and adopted by the City and County of Denver Board of Environmental Health.

5.4 Section 43.8; Design Criteria–General

A. General Applicability

1. Only those requirements pertinent to TL 1 are applicable in these regulations.
2. References to building, fire, electrical, and plumbing codes shall adhere to applicable current requirements of the Denver building, fire, and electrical codes.
3. With regard to Section 43.8.C.3.b – Riser Lids, a secondary plug, cap, cover, or screen is not required below the riser cover.

5.5 Section 43.9; Design Criteria–Components

A. General Applicability

1. Only those requirements pertinent to Single-Family Residential Homes are applicable in these regulations.
2. Section 43.9.C, Abandonment of Tank, is extended to include the following provision:
  - Whenever the use of a tank is discontinued the tank must be completely removed and the parts disposed of safely, except in situations where removal of the tank is reasonably expected to impact the structural integrity of an overlying dwelling or other permanent structure the Department may allow abandonment in place.
3. Effluent screens shall be required as described in Section 43.9.I.
4. Effluent screens are not required to be equipped with alarms.

B. Specific Exceptions

1. Section 43.9.J, Grease Interceptor Tanks, is not applicable.

5.6 Section 43.10; Design Criteria–Soil Treatment Area

A. General Applicability

1. All designs must be based on Treatment Level (TL) 1 parameters.
2. Bed widths are limited to 12 feet except for repairs.

3. Distribution lines shall be a maximum of 100 feet long.
4. An inspection port is required to be installed at the initial end of each distribution line.

## SECTION 6.0 ALTERNATE DISPOSAL SYSTEMS

### 6.1 General Requirements

- A. All alternate wastewater and sewage disposal systems in this section require Board approval.
- B. Design criteria and construction standards for alternate systems shall be sufficient to exclude flies and rodents from access to human excreta, prevent nuisances and health hazards, provide for cleanliness of such facilities, and prevent groundwater or surface water pollution.

### 6.2 Composting Toilets

- A. An approved composting toilet shall treat deposits of feces, urine, and readily decomposable household garbage that are not diluted with water or other fluids and are retained in a compartment in which aerobic composting will occur.
- B. Only manufactured composting toilets meeting NSF/ANSI 41 or an equivalent testing program and approved by the Colorado Department of Public Health and Environment may be installed.
- C. The composting toilet may be located within a dwelling or building provided that:
  1. it is specifically designed for interior use;
  2. it complies with the applicable requirements of these Regulations and applicable local building code(s); and
  3. the installation will not result in conditions considered to be a public nuisance or health hazard as determined by the Department.
- D. The effective volume of the composting toilet receptacle shall be sufficient to accommodate the number of persons served in the design of the unit installed. The effective volume of the unit shall include sufficient area for the use of composting materials which shall not be toxic to the process or hazardous to persons and which shall be used in sufficient quantity to assure proper decomposition.
- E. Residue from the composting toilet shall be removed prior to reaching 75 percent of capacity. Residue from the unit shall be properly disposed of by methods recommended by the manufacturer and acceptable to the Department. Disposal methods shall prevent contamination of water and not cause a public health nuisance.
- F. If a system will be installed where low temperature may be a factor, design and installation shall address the effects of low temperature on the effectiveness of the system.

G. Composting toilets shall be operated according to manufacturer's specifications.

6.3 Portable Chemical Toilets

A. Portable chemical toilets require permitting by the Department only if used inside a permanently occupied building and when used in accordance with Section 6.3.B, below. Portable chemical toilets for all other uses are not subject to this regulation but such other uses may be subject to permitting or other provisions of the DRMC.

B. Use of a portable chemical toilet in permanently occupied buildings is prohibited except during construction or under emergency circumstances as determined by the Department. If a portable chemical toilet is used inside a building or structure, the portable toilet must be properly ventilated.

6.4 Incinerating Toilets

An approved electrical incinerating toilet shall be designed and installed in accordance with all applicable federal, state, and local air-pollution requirements, manufacturer's instructions, and local building codes. Incineration toilets shall meet the requirement of NSF P157 or equivalent.

6.5 Pit (Non-vaulted) Privy

A. The construction of new pit privies is prohibited.

B. The continued use of existing pit privies is prohibited.

6.6 Slit Trench Latrines

A. The construction of new slit trench latrines is prohibited.

B. The continued use of existing slit trench latrines is prohibited.

6.7 Vault Privy

The construction of a new vault privy and the continued use of an existing vault privy shall meet the following minimum construction standards:

A. fly- and rodent-tight construction;

B. a superstructure affording complete privacy;

C. an earth mound around the top of the vault and below floor level that slopes downward away from the superstructure base for the purpose of diverting surface water away from the vault;

D. a floor, and a riser of concrete or other impervious material with hinged seats and covers of easily cleanable, impervious material;

E. venting that is fly-proofed with No. 16 or tighter mesh screening; and

F. an effective volume of the vault shall be no less than 400 gallons and constructed of concrete or plastic. The vaults for privies shall meet the structural and watertightness standards of vaults.

6.8 Vaults (Other than Vault Privies)



- A. Vaults for full time use in new construction are prohibited where a property can accommodate an OWTS with a soil treatment area.
- B. Vaults for full time use may be permitted when a failing OWTS cannot be replaced.
- C. Vaults may be permitted for limited use occupancy on a property which cannot accommodate an OWTS with soil treatment area.
- D. Vaults may be permitted if the facility is on land where the installation of an OWTS with soil treatment area is not permitted.
- E. Vaults may be permitted for systems where some of the wastewater flows are separated, such as toilet wastes only, into a vault. The portion not retained in the vault shall be treated in an adequately-sized OWTS.
- F. Vaults for non-residential use shall have a minimum 500 gallon effective volume or be capable of holding a minimum of the two-day design wastewater flow, whichever is larger.
- G. Vaults for residential use shall have a minimum 1000 gallon effective volume or be capable of holding a minimum of the two-day design wastewater flow, whichever is larger.
- H. Vaults shall have a visual or an audible signal device or both, indicating filling to a maximum of 75 percent capacity, to indicate when pumping is necessary.
- I. Concrete vaults shall meet the strength and watertightness requirements for septic tanks and shall meet the same installation and construction standards that apply to septic tanks, except that the vault shall contain a single compartment and no effluent outlet shall be provided.
- J. Prefabricated fiberglass, fiberglass-reinforced polyester, and plastic tanks may be used as vaults, if the tank manufacturer provides testing criteria certifying them for this use.
- K. Vaults shall be located in an area that is readily accessible for routine pumping during all seasons of the year as documented by a letter from a Systems Cleaner.
- L.
- M. The owner of a system that includes a vault shall obtain and maintain a contract with a Systems Cleaner for the routine pumping of the vault. The owner shall maintain copies of all pumping receipts for a period of three (3) years and shall furnish copies to the Department upon request.

#### 6.9 Wastewater Ponds

Construction of new wastewater ponds for single-family homes is prohibited.

### SECTION 7.0 SYSTEM MAINTENANCE

#### 7.1 Responsibility

- A. The owner shall be responsible for maintenance of an OWTS unless the responsibility has been contractually assigned to a tenant or other identified third party.
- B. Any person denying responsibility for the proper operation and maintenance of an OWTS shall bear the burden of proof for such denial upon establishment of ownership or possessory rights for the property served by the system.

7.2 Maintenance and Cleaning

- A. Unless specified as a condition of approval or set forth in a permit, the following inspection and maintenance schedule is recommended for all OWTS to promote effective working order:

Type of System	Inspection or Maintenance	Cleaned or Pumped
Septic Tanks	Annually	Every 2 – 4 years
Vaults, Privy Vaults, Holding Tanks		At 80% capacity

- B. Disposal of waste materials removed from a system in the process of maintenance or repair must comply with applicable Federal, State and local regulations and requirements, provided it does not create a hazard to the public health, a nuisance, or risk of pollution of surface or ground water. Liquid wastes and sludge shall be removed by a Systems Cleaner for proper disposal.

**SECTION 8.0 VARIANCES**

8.1 Variances Allowed

- A. Only the Board is authorized to approve a variance from a requirement of this Regulation. Variances cannot be granted by Department staff.
- B. The Board shall consider a variance request for a new OWTS installation that meets both of the following conditions:
  - 1. The request is for a location where the nearest point of the property line is three hundred (300) feet or farther from the public sanitary sewer; and
  - 2. The structure is one thousand (1,000) feet or farther from the public sanitary sewer.
- C. Approval of a variance shall be based upon evidence presented by the applicant showing that either or both of the following conditions are present:
  - 1. The OWTS installation would not be injurious to the public health, water quality, or the environment.

2. The necessity for the variance would prevent a substantial hardship to the applicant.

## 8.2 Variance Procedure

- A. Variance requests shall conform to the procedures detailed in Rules Governing Hearings before the Board of Environmental Health.
- B. Variance requests must include and address all of the following:
  1. Site-specific request identifying the specific criteria from which a variance is being requested;
  2. Technical justification by a professional engineer or professional geologist, which indicates the specific conditions which exist and/or the measures which will be taken that support a finding that the variance will result in no greater risk than that associated with compliance with the requirements of the regulation. Examples of conditions which exist, or measures which might be taken, include but are not limited to the following: evidence of a natural or manmade physical barrier to the movement of effluent to or toward the feature from which the variance is requested; placement of a manmade physical barrier to the movement of effluent to or toward the feature from which the variance is requested; soil replacement with sand filter media to reduce the infiltration rate of the effluent such that the travel time of the effluent from the absorption field to the physical feature is no less than the travel time through the native soils at the prescribed setback and Treatment Level 2;
  3. A discussion of alternatives considered in lieu of the requested variance;
  4. Technical documentation for selected alternative, which may include a testing program, which confirms that the variance does not increase the risk to public health and to the environment; and
  5. A statement of the hardship that creates the necessity for the variance.
    - a. The applicant has the burden of proof to demonstrate that the variance is justified and will pose no greater risk to public health and the environment than would a system meeting these regulations. The Board shall determine if this item has been addressed prior to granting a variance.
- C. The Board has the authority to impose site specific requirements and conditions on any variance granted.