

**TOWN OF BOXBOROUGH  
MASSACHUSETTS**

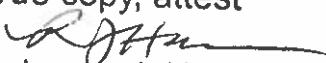


**BOARD OF HEALTH  
29 MIDDLE ROAD  
BOXBOROUGH, MASSACHUSETTS 01719**

**REGULATIONS**

**ARTICLE I**

**SUBSURFACE DISPOSAL OF SEWAGE**  
(adopted 10/18/00 - revised 3/12/25)

True copy, attest  
  
Rebecca J. Harris  
Boxborough Town Clerk



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Previous versions of Boxborough Board of Health Regulations controlling the subsurface disposal of sewage are rescinded and superseded hereby.

## **SECTION 1. AUTHORIZATION**

These regulations are adopted pursuant to Sections 31 and 127 of Chapter 111 of the General Laws and shall be interpreted so as to be consistent with the provisions of Title 5 of the State Environmental Code (310 CMR 15.001-15.505) "Minimum Requirements for the Subsurface Disposal of Sanitary Sewage," dated 3/24/95 (effective 3/31/95) and as amended in the future.

## **SECTION 2. DEFINITIONS**

The definitions in 310 CMR 15.002 shall apply except as modified or added to in this section.

**Agent:** See Nashoba Associated Boards of Health

**Approval Not Required:** meaning as used in Chapter 41 section 81K & 81P (subdivision control law, approval of plan not subject to control law)

**As-Built Plan:** A drawing as described in Section 4.8 and Title 5, 310 CMR 15.021, prepared, signed, and stamped by the designer (as defined in 310CMR15.002), showing the system as constructed.

**Board:** The Board of Health of the Town of Boxborough, the approving authority as defined in 310 CMR 15.002.

**Construction:** Refers to installation and repairs of **on-site subsurface sewage disposal system**.

**Deep Observation Hole:** An open pit dug to permit the examination of the soils and to obtain data relative to the mean annual high groundwater elevation.

**Designer:** A professional engineer (civil or sanitary) currently registered as such in the Commonwealth of Massachusetts or registered sanitarian currently registered as such in the Commonwealth of Massachusetts

**Disposal System Construction Permit or Permit:** Written approval issued by the Board or its Agent in accordance with 310 CMR 15.020 authorizing the construction, upgrade or expansion of an **on-site subsurface sewage system**.

**Field Tests:** Percolation tests and deep observation holes in which soil suitability, characteristics and groundwater elevation are observed and recorded, which are witnessed by Nashoba, and which may serve as a basis for the design of a system.

**High Groundwater Elevation** - As determined in accordance with 310 CMR 15.101, 15.102 and 15.103.

**Nashoba Associated Boards of Health:** Hereinafter referred to as "Nashoba." A regional health district, of which the Town of Boxborough is a member, which acts as agent for the Boxborough Board of Health in matters including those pertaining to the implementation and enforcement of the provisions of 310 CMR 15.001-15.505.

**Percolation Test** - A field test to assess the suitability of soils in a defined area for the subsurface disposal of sewage as described at 310 CMR 15.104 and 15.105.

**Perimeter Drain:** Also called interceptor drain and curtain drain. A drain constructed for the purpose of intercepting and diverting groundwater flow so as to lower the groundwater level.

**On-site System or Disposal System or On-site Subsurface Sewage Disposal System or System-** A system or series of systems for the treatment and disposal of sanitary sewage below the ground surface on a facility. (a) The standard components of a system are: a building sewer; a septic tank to retain solids and scum; a distribution system; a soil absorption system containing effluent distribution lines to distribute and treat septic tank effluent prior to discharge to appropriate subsurface soils; and a reserve area. (b) These terms also include tight tanks, shared systems and alternative systems. Unless the text of 310 CMR 15.000 indicates otherwise, these terms also include nonconforming systems.

**Soil Absorption System (SAS):** A system of trenches, galleries, chambers, pits, field(s) or bed(s) together with effluent distribution lines and aggregate which receives effluent from a septic tank or treatment system.

**Subdivision Approval:** meaning as used in Chapter 41 section 81K & 81P (subdivision control law, approval of plan not subject to control law)

**Unsuitable Field Test Hole:** A percolation rate greater than thirty minutes an inch and/or, a deep observation hole which exhibits less than five feet of naturally occurring, pervious soil (in accordance with Title 5). This definition applies to properties and/or facilities considered new construction by Title 5 of the State Environmental Code, 310CMR15.000.

### **SECTION 3. ADMINISTRATION**

The Board reserves the right to exercise all authority and perform all functions assigned to and normally exercised by its agent.

### **SECTION 4. GENERAL REQUIREMENTS**

#### **4.1 Applicability**

This regulation, in conjunction with Title 5, shall be used to design and install disposal systems in the Town of Boxborough.

#### **4.2 Application for Disposal System Construction Permit**

An application and fee for disposal system permit (hereinafter referred to as a permit) shall be filed with the Board for all installations and repairs of systems. A fee shall be paid to the Town at the time of application, as determined by a fee schedule adopted by and on file with the Board. In addition, the applicant shall be responsible for fees payable to Nashoba, for a plan review, inspections, and the issuance of a certificate of compliance

#### **4.3 Application for Lot Inspection**

An application for lot inspection shall be made to Nashoba, and any fee required shall be paid to Nashoba at that time. All field tests to be used as a design basis for a system shall be conducted by an engineer and shall be witnessed by Nashoba. Inspections required during the construction of a system shall be made by Nashoba.

#### **4.4 Fill Easement**

No Certificate of Compliance shall be issued if fill associated with any component of the system extends onto an adjacent lot, or if the plan requires that fill associated with the reserve area extend onto an adjacent lot, unless an appropriate easement is duly executed by the owner of said lot, recorded at the registry of deeds and a copy of said easement is submitted to the Board. If a system design includes a fill easement, the requirement to obtain a copy of the recorded easement shall be included as a condition on the permit for the system.

#### **4.5 Availability of Water Supply**

Reference is made to General Laws Chapter 40, Section 54. No building permit shall be issued for the construction of a building which would necessitate the use of water therein until a water supply approved by Nashoba and appropriate to the use of the building has been constructed on the lot.

#### **4.6 Issuance of Disposal System Construction Permit**

All systems or series of systems for the treatment and disposal of sanitary sewage, above or below the ground surface, on a facility are required to be approved and permitted by the Board of Health prior to construction in accordance with Title 5; those system with a design flow of 10,000 gallon per day or greater shall comply with the Groundwater Discharge Permit Program regulations 314 CMR 5. After reviewing the plan, Nashoba shall prepare a permit and shall forward the permit to the Board. If Nashoba approves the plan, the agent shall sign the permit. If Nashoba does not approve the plan, the agent shall forward the plan and permit to the Board with a written summary of the reasons for not approving the plan. At a scheduled meeting, the Board shall review the plan, the permit and any other applicable documents and shall issue the permit or shall deny the permit and provide the applicant or the applicant's representative with reasons for denial.

All systems greater than 2,000 gal. shall include nitrogen removal treatment in accordance with recirculating sand fillers or equivalent technology.

#### **4.7 Inspections during Construction**

Nashoba shall inspect the construction of a disposal system to ensure it is in accordance with the approved permit. Construction shall not proceed beyond a stage requiring inspection until such inspection has been conducted and approval has been granted by Nashoba. Appointments for inspections shall be made with Nashoba at least twenty-four hours prior thereto.

#### **4.8 As-Built Plan**

After construction is completed, **an as-built plan by the designer** shall be prepared and submitted to Nashoba and to the Board, showing final grading, as-built elevations, and location of existing components. No overlays will be accepted for as-built plans. As-built plans shall be prepared, signed, and professionally stamped by the designer. The as-built plan for installation or repair of a system shall not be prepared by the individual or firm under whose Disposal Works Installer's Permit the work has been performed.

#### **4.9 Certificate of Compliance**

Nashoba shall, after approving the construction of a system, prepare and issue a Certificate of Compliance for the system. The Board reserves the right to deny the issuance of the certificate if there were deviations in the system's installation, that are not in compliance with Title 5, this regulation, and/or the approved permit. If unanticipated conditions encountered during construction necessitate deviations from the approved plan, it shall be the responsibility of the applicant to request prior approval for such deviations from Nashoba or the Board. No building with a system that has been installed or repaired after the effective date of these regulations shall be occupied unless a Certificate of Compliance has been issued for the system.

#### **4.10 Shared Systems**

The use of a subsurface sewage disposal system by more than one lot is prohibited. The system shall be located entirely within the lot being served by the system.

#### **4.11 Hydrogeologic Studies**

The Board reserves the right to request (for parcels of land created under **Chapter 41 section 81K & 81P (subdivision control law, approval of plan not subject to control law)**) applicant(s) perform hydrogeologic studies in accordance with guidelines provided by the Board, to assess the cumulative impact of septic systems and other contaminant sources on groundwater quality.

### **SECTION 5. FIELD TESTS**

The results of all field tests performed in the vicinity of a proposed or existing system, including the reserve leaching area, shall be provided to Nashoba and the Board on the plan or on sheets referenced on and attached to the plan and certified by the soil evaluator and designer conducting the tests. No field test data shall be used for design unless Nashoba has witnessed the field tests.

#### **5.1 Deep Observations Holes**

Deep observation holes can be excavated at any time during the year. Nashoba may require additional deep test holes based on site conditions. A 25-foot minimum offset from an unsuitable deep observation hole to the proposed primary and reserve leaching areas is required. Deep observations holes shall be backfilled once the field test has been completed.

#### **5.2 Minimum Depth of Soil**

The minimum depth of naturally occurring soil required for the design of a disposal system, for properties and facilities considered new construction (in accordance with Title 5), shall be 5 ft.

#### **5.3 Percolation Tests**

Additional percolation tests may be required by Nashoba to determine the vertical and/or lateral variations in soil conditions. Percolation tests shall not be performed in deep test holes. The results of all percolation tests performed on a lot, in or near the area of the system, shall be presented on the plan. A 25 ft. minimum offset from the proposed leaching areas (both primary and reserve) is required for unsuitable field test holes.

#### **5.4 Location of Reserve Area**

The location of the reserve area shall be designed so that it is able to be brought into service without discontinuation of the primary system; reserve trenches, pits galleries, chambers between the components of the primary system are not permitted. Reserve areas for upgrades, if feasible, shall be designed.

### **SECTION 6 SYSTEM DESIGN CRITERIA**

All information, required by this regulation and Title 5, related to and necessary for the design or repair of a system shall be included on the plan or on sheets referenced on and attached to the plan and certified by the designer.

#### **6.1 Leaching Area**

The minimum leaching area to be installed shall be determined from 310 CMR 15.242(1) with the following exceptions: percolation rates over 20 minutes an inch shall be designed by using the L.T.A.R. of 0.33 gpd/sq. ft. This requirement applies to properties and/or facilities considered new construction by Title 5 of the State Environmental Code, 310CMR15.000.

#### **6.2 Perimeter Drains**

Drains shall only be installed during periods of low groundwater, typically July – September. Perimeter drains shall be gravity flow only; no pumped drain system shall be allowed. The effectiveness of a perimeter drain system in lowering the maximum groundwater elevation shall be determined by deep test holes or monitoring wells as described in Sections 2 and 5.2.2. Effectiveness monitoring shall be performed only during the usual high groundwater period of March and April.

#### **6.3 Distance to Wetlands**

No part of the soil absorption area (as defined by Title 5), shall be constructed within 100 ft. of a bordering vegetative wetland, as defined by the Wetlands Protection Act. The fill required to meet breakout grading shall be included in the offset for disposal systems proposed on facilities considered new construction in accordance with Title 5.

#### **6.4 Distance to Wells**

No part of a system (sewer lines, tanks, leaching area, pump chambers, etc.) considered new construction in accordance with Title 5 shall be constructed within 100 ft. of any existing or proposed water supply well or within 50 ft. of any existing or proposed heat pump well. The requirements stated in this subsection do not apply to wells that are abandoned and plugged, sealed, back filled, or otherwise rendered permanently unusable. An offset of 50 ft. (minimum) shall be maintained from an “irrigation” or other non-potable supply to any SAS. Disposal systems proposed for facilities **not** considered new construction, in accordance with Title 5, shall

comply with the offsets to wells noted in Title 5; if any part of the disposal system is within 100' of the on-site well, the well must be tested as part of the disposal system replacement.

## **6.5 Distance to Property Line**

No part of a disposal system shall be constructed within 20 ft. of any property line.

## **6.6 Retaining Walls and Impervious Barriers**

Retaining walls and impervious barriers for new construction used for breakout grading purposes around the leaching areas are not permitted. If necessary, and approved by the Boxborough Board of Health, retaining walls used for upgrades of failing septic systems must be constructed of reinforced concrete in compliance with the subheadings (a)-(g) of 301 CMR 15.255(2).

## **6.7 Pump Systems**

Force mains exceeding 250 ft. shall be prominently marked by an object identifying its location. Once the force main is installed it must be pressure tested, witnessed by Nashoba, prior to backfill.

# **SECTION 7 PLANS**

Plans for the construction of systems shall be prepared by a designer, as described in Section 7 and in 310 CMR 15.220 and shall be submitted to Nashoba and the Boxborough Board of Health.

## **7.1 Scale**

Plans shall be prepared at a scale of one inch equals twenty feet (1"=20').

## **7.2 Required Information**

The following information, in addition to that required by 310 CMR 15.220, shall be provided on all plans and **as-built plans**:

- Identification of lot by street number or Assessor's parcel number.
- Existing topography and proposed grading changes, shown by contours at 2 ft. intervals or less based on the most recent Boxborough datum, National Geodetic Vertical Datum (NGVD)
- For systems with lines more than 100 ft. long between the cellar wall and distribution box: groundwater, soil and bedrock conditions along proposed route of pipe; type of pipe and joints; locations and details of clean-outs and manholes.
- For perimeter drains: location; pipe invert elevations at both ends and at each change in slope and each change in direction; and cross section showing design details.

# **SECTION 8 MAINTENANCE**

## **8.1 Septic Tank Maintenance**

Every owner or agent of premises served by a system should have the septic tank pumped no less frequently than once in every three-year period. For multi-family dwellings, including condominiums, apartments, motels, hotels and boarding houses, the Board of Health strongly recommends the owner or agent have the septic tank pumped at least once every year and provide to the Board written proof of such pumping, by paid invoice or other suitable documentation from a septage handler who has a current permit as required by 310 CMR 15.202(1).

**8.1.A.** – The licensed hauler is required to provide to the Boxborough Board of Health the date(s) of pumping, address, volume pumped and destination of the effluent disposal location.

## **8.2 Repairs**

The owner of a failed system shall, within seven (7) days of such failure, notify Nashoba and the Board of Health and shall, within thirty (30) days of such failure, apply to the Board for a **Disposal System Construction Permit**, pay the required fee to the Board and Nashoba, and submit plans to the Board and to Nashoba.

The owner of a failed system is required to pump the system as often as necessary to prevent sewage from breaking out of the ground. System failures are required to be brought into compliance with this regulation and Title 5 within six (6) months of indication of the failing system. This includes obtaining a Certificate of Compliance within six months.

## **SECTION 9 VARIANCE PROCESS**

The Board may grant a variance from the application of these regulations when, in its opinion, the enforcement thereof would do manifest injustice, and the applicant has demonstrated that the equivalent degree of protection will still be provided without strict compliance with the provisions of these regulations.

Every request for a variance shall be made in writing and shall state the specific variance sought and the reasons therefor. The request shall contain the information needed to assure the Board that, despite the issuance of a variance, public health and the environment will be protected.

Applicants requesting local upgrade approvals and/or variances to Title 5 shall follow the processes contained therein.

Any grant or denial of a variance shall be in writing and shall contain a brief statement of the reasons for approving or denying the variance.

## **SECTION 10 REVOCATION**

The Board reserves the right to revoke any approval, permit or Certificate of Compliance which is found to be based on incorrect, incomplete, or misleading information.

## **SECTION 11 SEVERABILITY**

The provisions of these regulations are severable, and if any of its provisions are held to be unconstitutional or otherwise invalid by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the remaining provisions.

BY BOXBOROUGH BOARD OF HEALTH

[approved by Boxborough Board of Health 3/12/25, published 4/4/25 (The Action)]