

**TOWN OF BOLTON, MASSACHUSETTS
BOARD OF HEALTH REGULATIONS
REQUIREMENTS FOR THE SUBSURFACE DISPOSAL OF SANITARY
SEWAGE**

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Revised: 5/21/84; 2/19/85; 8/19/86; 9/29/86; 10/28/86; 1/21/87; 2/23/88; 3/22/88; 1/14/91;
12/3/92;7/11/95;12/12/95;9/10/96;4/30/99;10/30/01; **4/26/05**

The Commonwealth of Massachusetts State Environmental Code 310 CMR 15.000 (Title 5) shall be considered a minimum standard for the design and installation of sewage disposal systems. The Bolton Board of Health has enacted the following regulations, as authorized by MGL, Chapter 111, Sec. 31, Sec. 127 and CMR 15.003 (3), (4) and (5).

In any case where a conflict arises between a provision of this regulation, and the provisions of zoning, building, fire safety, or other code of the Town of Bolton or the State Sanitary Code, the provision which in the judgment of the Bolton Board of health establishes the higher standard for the protection of public health and safety shall prevail.

Title 5 of the State Environmental Code (hereafter called Title 5) shall be considered the minimum standard for the design and installation of subsurface disposal systems for sanitary sewage in the Town of Bolton. In addition, the Bolton Board of Health has issued the following supplemental regulations to Title 5. The intent of these supplemental regulations is to provide for inadequacies and/or deficiencies in the requirements of Title 5 as they apply to the Town of Bolton.

The invalidity of any section(s) or provision(s) of these regulations shall not invalidate any other provision or section thereof.

REGULATION 1: Permits - All permits issued under 310CMR of Title 5 must be reviewed and approved by the Bolton Board of Health before any construction can begin. Permits issued under Section 15.019, 15.020, and 15.502 or Title 5 by an agent for the Bolton Board of Health will be valid in the Town of Bolton unless the permit holder is notified by the Bolton Board of Health.

REGULATION 2: Reserve Area - A reserve area of at least equal capacity suitable for subsurface sewage disposal and upon which not permanent structures will be constructed, must be provided for all sewage disposal systems. The reserve area must be at least ten (10) feet away from the primary leaching area. The area between the leaching pits, galleries, chambers and trenches may not be used for part, or all, of the reserve area unless this ten foot requirement is met. The reserve area shall be accessible by gravity flow if the primary system is gravity fed.

REGULATION 3: Groundwater Elevation - On any lot, in the area to be used for leaching, except as noted below, there will be at least two deep observation holes plus any additional number which, in the opinion of the Bolton Board of Health or its Agent, will be necessary to determine the consistency (or lack thereof) of the character of the soil, the groundwater elevation and the presence of bedrock or impervious materials. The deep observation holes shall be examined to a depth of at least ten (10) feet unless this depth is unattainable because of bedrock, etc. Deep observation holes must show at least four (4) feet of consistent naturally occurring soil material below the bottom of the proposed leaching system. At least one deep observation hole in each proposed leaching area shall be provided during the period when the groundwater is determined to be at its maximum elevation. The period when groundwater determination is allowed will be established by the Bolton Board of Health, or its agent, on an annual

basis. The bottom of the leaching system offset from groundwater or mottling will be determined by the Bolton Board of Health or Nashoba Associated Boards of Health for the specific ground water observation season or portion thereof.

REGULATION 4: Percolation Test - The purpose of the percolation test is to determine the suitability of the soil at the leaching elevation and to a depth of four (4) feet below this elevation. In cases where the soil varies with depth as indicated by the deep observation holes, percolation tests at various elevations may be required by the Bolton Board of Health or its agent.

a. At least 2 passing (i.e. rates less than 30 minutes/inch) percolation tests must be provided in both the proposed primary leaching area and in the proposed reserve area. Additional tests will be required by the Bolton Board of Health or its agent, where the soil structure varies or where large disposal areas are required. Percolation tests can be performed at any time of the year.

b. Percolation tests as prescribed in this section shall be performed at no expense to the Bolton Board of Health, or its agent, by a Registered Professional Engineer, Registered Sanitarian or a Soil Evaluator. All percolation tests shall be performed in the presence of the Bolton Board of Health or its agent. The cost of labor and equipment necessary to dig observation holes and the provision of water for the performance of the percolation tests shall not be at the expense of the Bolton Board of Health or its Agent.

c. Percolation tests shall not be made in holes that have remained open to the atmosphere for more than three days, nor shall they be made in frozen soil. Percolation tests may be performed when the elevation of the soil to be tested is below the frozen soil layer.

d. The slowest percolation rate obtained shall govern the leaching area requirements of the primary and reserve areas.

e. A leaching area shall not be located closer than twenty five (25) feet from a failing percolation test (i.e. rate greater than thirty (30) minutes per inch unless a passing percolation rate has been proven between the leaching area and failing percolation test.

f. Sewage systems to be constructed in fill must be designed according to the percolation rate of the underlying original soil.

g. *If the percolation tests indicate that multiple distances, as defined under Regulation 5, could apply, the Board will determine which distances shall apply. The Board may require additional testing, as specified in regulation 4(b), to clarify the soil conditions in the area, prior to making a determination.*

Notes:

(1) Sidewall area is the pervious vertical interface of the excavation for the leaching facility below the invert elevation or the inlet or the lowest invert elevation of the distribution line.

(2) Bottom area is the pervious horizontal interface of the excavation for the leaching facility.

(3) Systems for more than 2,000 gallons per day shall not be installed where the percolation rate is slower than 20 minutes per inch.

REGULATION 5: Distances - No disposal facility or water supply shall be closer than the distances stated to the components listed in the following table. The distance shall be increased where required by conditions peculiar to the location.

Component	Septic Tank (feet)	Leaching Facility (feet)	Leaching Facility in soils with percolation rate of 2 min./inch or less	Building Sewer (feet)	Well (feet)
Private water supply, Irrigation well, or suction line	50(5)	100(1)(5)	150(2)(4)(5)	50	-
Water supply line (pressure)	(3)	(3)	(3)	(3)	-
Property line	10	25	25	-	50
Road sideline	35	35	35	-	50
Cellar Wall, foundation drain or inground swimming pool	25	25	25	-	-
*Wetland, bordering vegetated wetland and surface water of any type (7)	100(2)(4)	100(2)(4)	150(2)(4)	(4)	100(2)(4)
Subsurface drains (6)(7)	25	25	25	-	-
Leaching catch basin or dry well	25	2	25	-	-
Ledge (surficial or by test hole observation) -	-	25	25	-	-
Leaching facility servicing: a separate building	-	100	100	-	100(8)

Notes:

(1) 100 feet is the minimum acceptable distance and no variance shall be granted for a lesser distance except with the prior written approval of the Department of Environmental Protection.

- (2) All Distances shall be measured from the average of the Mean Annual Flood Elevation in inland areas and from Mean High Water in coastal areas.
- (3) It is suggested that the disposal facilities be installed at least 10 feet from and 18 inches below water supply lines. Wherever sewer lines must cross water supply lines both pipes shall be constructed of class 150 pressure pipe and should be pressure tested to assure water tightness.
- (4) The applicant should be aware of the obligation to comply with the requirements of Wetlands Protection Act MGL Chapter 131, Section 40.
- (5) In area of known or suspected ledge, the sewage disposal system (including the septic tank) must be at least 100 feet from any wells. If the septic tank is installed in the groundwater table the septic must be 100 feet from any wells.
- (6) Open surface or subsurface drains which do not discharge to surface water supplies or tributaries there to and do not intercept seasonal high groundwater table.
- (7) As defined in Title 5, 15.002 Definitions
- (8) A leaching facility in soils with a percolation rate of 2 minutes per inch or less must be 150 feet minimum from a private water supply.

*Wetlands as defined by Wetlands Protection Act MGL Chapter 131, Section 40 and Corps of Engineers Wetland Delineation Manual, 1987

REGULATION 6: Garbage grinders are not allowed.

REGULATION 7: Length of Sewer line - The total length of the sewer line from the foundation to the leaching facility shall be governed by the requirements listed in Regulation 7(a), 7(b), and 7(c). Any plans submitted under Title 5, Section 15.220 for a Sewage Disposal System with a sewer line meeting the distances described under Regulation 7(a) or 7(b) must include details of the construction of the sewer line.

- (a) If the sewer line exceeds one hundred twenty (120) feet, or the leaching facility is more than one hundred (100) feet from the foundation, the Board will require a deed restriction requiring annual inspections by either the home owner or a licensed Title 5 inspector, in accordance to Regulation 20, at the Board's discretion.
- (b) If the sewer line exceeds three hundred fifty (350) feet, or the leaching facility is more than three hundred (300) feet from the foundation, the Board will require a deed restriction requiring annual inspections by a licensed Title 5 inspector in accordance to regulation 20.
- (c) Under no circumstances shall the length of sewer line, for new construction, exceed six hundred (600) feet, or place the leaching facility more than five hundred (500) feet from the dwelling.

REGULATION 8:

a. An individual sewage disposal system and all connecting sewer lines shall be installed on the same lot as the facility(ies) discharging sewage into said system.

b Shared systems will be approved for new construction following determination of the number of lots by the Board. The board will require:

- A plan showing the conventional lots with their systems. This plan must be Title 5 (310 CMR15) and local Board of Health variance free.
- Complete design plans for some, or all of the proposed conventional lots, of the Board's choosing, to verify that their designs would be variance free.
- The proposed lot plan utilizing the shared system.
- Written response from all relevant Town of Bolton Boards (Planning, Conservation, etc) that they would approve the number of lots shown on both the conventional and shared system lot configurations.
- Under no circumstances will the number of lots on the shared plan be greater than the number on the conventional plan.

The Board may require financial and legal guarantees beyond those required by DEP, to insure system inspections, maintenance, repair and replacement will occur without delay or expense to the Town of Bolton.

REGULATION 9: When one or more lots are subdivided from a parcel of land with a structure discharging into a disposal system, a plan showing the location for the septic tank, leaching system, well, and a leaching system expansion area must be submitted for the existing structure on the subdivided lot. The future sewage disposal expansion area for the existing structure must meet Bolton Board of Health regulations for a new subsurface sewage disposal system. The plan must be prepared by a registered professional engineer or registered sanitarian and receive Board of Health approval prior to approval of subsurface sewage disposal works construction permits for lots subdivided from the original parcel with the existing structure.

REGULATION 10: Locus Maps:

- a. Any permit for a subsurface sewage disposal system must be accompanied by a locus map showing all proposed and existing wells and proposed and existing subsurface sewage disposal systems on the lot and all lots within two hundred (200) feet of the proposed and existing wells and the proposed and existing onsite subsurface sewage disposal systems. For wells and subsurface disposal systems over 150' from the proposed and existing wells and the proposed and existing onsite subsurface disposal system, direction and distance can be denoted.
- b. If a proposed project contains three (3) or more lots, the Board of Health requests three (3) copies of a master plan be submitted showing the lot lines; topography, proposed septic system, well and house site locations, wetlands, surface water, drains, easements and flood plain information. This plan must be submitted prior to the submission of individual lot plans for approval. A site visit may also be required.
- c. It is the responsibility of the applicant or applicant's agent to identify, in writing, the location of a project in relation to Zone I, Zone II and IWPA for public water supplies and potentially productive aquifers which are all aquifers delineated by the U.S.G.S. as a high or medium yield aquifer, 100 year flood plain, surface water supplies, tributaries to surface water supplies.
- d. The plan must include a USGS locus map and soil survey map and relevant soil series descriptions.
- e. For all applications the location for well and center of leaching facility must be located by USGS longitude and latitude and/or UTM (Universal Transverse Mecator).

- f. All subsurface sewage disposal system inspection forms must include the location of the well and center of leaching facility by USGS longitude and latitude and/or UTM (Universal Transverse Mecator).

REGULATION 11: Pump Systems:

- a. All force main sewer lines used for effluent pump and grinder pump systems shall be 160lbs. flex or equal. The force main, once installed, must be pressure tested at least 15 p.s.i. for 15 minutes prior to back fill. The force main must be bedded in a minimum of 6 inches of sand.
- b. The effluent pump(s) must be installed in a manner that is accessible for repair and maintenance as to eliminate the need for entry into the septic tank or pump chamber.
- c. Wiring shall be either:
 - (i) continuous to the building without the use of a junction box in the pump chamber. This includes wiring for the pump and the floats; or,
 - (ii) continuous to a junction box within the pump chamber. The junction box shall adhere to NEMA Enclosure 4X specifications or better, and be approved by the Bolton Board of Health and the Bolton electrical inspector prior to installation. Wiring from the junction box to the house shall be continuous.
- d. For effluent pump systems, there shall be a tee with 1/4” tubing to allow effluent to drain back from the force main. The tee shall be installed after the check valve.
- e. The maintenance of all pump systems, solid or effluent, shall be explained to the home owner by the installer and/or builder prior to occupancy.

REGULATION 12: Alternative Systems:

The Board of Health may establish any special conditions necessary to ensure adequate protection of public health and safety and the environment, and to ensure appropriate evaluation inspections, maintenance repairs and replacement. Such conditions may include without limitation: specification of site of effluent characteristics; flow limitations; monitoring; inspection maintenance; testing; and reporting requirements; a requirement that a certified operator operate the system; and financial assurance mechanisms. The Board of Health may also specify changes or modifications of requirements otherwise applicable to conventional systems and that are appropriate for use of the alternative systems. Prior to the approval of an alternative system for new construction the applicant must demonstrate that the lot can support a subsurface sewage disposal system meeting Title 5 and Bolton Board of Health regulations without a variance. The area proposed which could support a subsurface sewage disposal system on each lot shall not be used for any other purpose.

New owners and occupants of facilities which have alternative systems must certify that they have read and understand maintenance and reporting requirements prior to occupancy.

REGULATION 13: Hydraulic Overloading:

The minimum distance between septic systems servicing separate buildings or facilities shall be 100 feet (includes primary and reserve areas).

REGULATION 14: 100 Year Flood Zone:

1. No septic tank or humus/composting toilet shall be constructed in a 100 year flood zone, except a septic tank that replaces a tank in existence on the site as of March 31, 1995 that has been damaged, removed or destroyed, where placement of the tank outside of the 100 year flood zone, either horizontally or vertically, is not feasible. Where reconstruction of a system in existence on March 31, 1995 occurs or reconstruction of a building or buildings is allowed in accordance with the wetlands protection act and 310 CMR 10.00, it shall be presumed to be feasible to elevate the tank if the building is elevated above the 100 year flood zone.

2. No soil absorption system shall be constructed in a 100 year flood zone, unless

(a) the system is to serve a building or buildings that were in existence on March 31, 1995 or reconstruction of such building or buildings where allowed in accordance with the wetlands protection act and 310 CMR 10.00:

(b) there is no increase in design flow from such building or buildings;

(c) no connection to a public sewer or shared system is available;

(d) the owner or applicant cannot site the system elsewhere;

(e) the septic tank or humus/composting toilet is sighted outside of the 100 year flood zone, either horizontally or vertically;

(f) the system achieves required separation from high groundwater elevation required by 310 CMR 15.212; and

(g) any portion of the soil absorption system that is within the 100 year flood zone is a leaching bed or trench system or any other system constructed in accordance with the wetlands protection act and 310 CMR 10.00.

Regulation 15: In situations where the 1978 Environmental code, Title 5, applies, the Bolton Regulations in effect prior to March 31, 1995 must be met.

Regulation 16: Ledge

As the Town of Bolton relies on local well water supplies, particular attention shall be paid to the location of any ledge in relation to a proposed sewage disposal system. Decayed ledge or decayed shale, top soil, and subsoil shall not be considered pervious material. Depth of naturally-occurring pervious material above ledge must be five feet; fill shall not be used to meet this requirement.

Regulation 17: System Repair and Maintenance

a. Any construction, repair, replacement or maintenance on septic systems shall comply with all applicable state and federal requirement, including but not limited to 29 CFR 1910, Permit-Required Confined spaces for General industry.

- b. It is the responsibility of the owner of a property to maintain the area around the sewer line, distribution box and leaching facility free from deep root vegetation which could cause premature failure due to root infiltration or increased erosion. It is the responsibility of the owner to maintain proper earthen cover over the components of the septic system, and maintain the required minimum breakout slope for the leaching facility as permitted. Any modifications to the approved system and/or breakout slope are subject to review and approval by the Bolton Board of Health.
- c. Distribution boxes and soil absorption systems shall be maintained so as to prevent root growth or other obstructions to inhibit operations as designed.

Regulation 18: Variances

All variance requests shall require notification of the abutting property owners, and a public hearing. In the event of the subdivision of a parcel, the abutters of any lot of the subdivision are considered to be the abutters of the original parcel in addition to the owners of any lots already developed. This holds until all lots within the subdivision have been developed. Abutting properties are defined as all parcels and lots within 300' of the original parcel.

The applicant shall post a legal notice in a local newspaper a minimum of ten (10) days before the scheduled hearing date; the application shall bear the expenses of the posting. The notice shall state the date, time, and place of the hearing; the location and owners of the property, the local regulation for which the variance is requested, and, in the case of offset variances, the regulation and proposed distances. The applicant shall present proof of the hearing notice to the Board at the onset of the hearing.

In addition, a written notice of the variance hearing request and hearing date, time, place of hearing, the location and owners of the property and the local regulation(s) for which the variance is requested is to be sent to the abutters by registered or certified mail ten (10) days before the hearing date. The application shall present the mailing receipts to the Board of Health at the onset of the hearing. The notice shall include language that the abutter may attend the meeting in person or by mailing the Bolton Board of Health a letter of concern to be received by the Board prior to the hearing date and time.

Regulation 19: Subsurface disposal system sizing:

- (a) The total number of rooms for a single family dwelling shall be the total number of rooms, not including any bathrooms, hallways, unfinished cellars, and unheated storage areas.
- (b) For new construction, the number of bedrooms shall be defined as the maximum of: three (3) or the total number of rooms, as defined in 19(a), divided by two (2) rounded down.
- (c) For new construction, the subsurface disposal system must be sized to support the number of bedrooms calculated in 19(b). No deed restrictions for the number of bedrooms will be allowed, without prior approval of the Board.
- (d) For additions, and house renovations, the Board, at it's discretion, can require a deed restriction limiting the number of rooms that can be used as bedrooms, or require the system to be upgraded to support the additional rooms in the house.

Regulation 20: Third party annual subsurface disposal system inspections:

Third party annual subsurface disposal system inspections are mandatory for systems that meet the criteria detailed in Regulation 7(b) and may be required for Regulation 7(a). This inspection requires that the inspector walk the sewer line from the foundation to the leaching facility, opening and inspecting each of the cleanouts along the line. The inspector must also make note of any deep root vegetation that is within

10 feet of either side of the line. The leaching area must be inspected for signs of breakout, erosion, and deep root growth. Any deep root growth within 10 feet of the leaching area must also be noted on the inspection form. An inspection form, supplied by the Board, must be completed and sent to the Board within 14 days of the inspection.

Regulation 21: Sewage disposal during construction:

All construction sites must provide for sewage disposal during construction. This can be via Port-o-potty or equivalent on site, or access to adjacent structures providing for waste disposal. Any facilities must be within 200 yards of the construction site. These alternate waste disposal services must remain on site until the occupancy permit is issued.

Form for Regulation 20: Third party annual subsurface disposal system inspections:

Bolton Board of Health
663 Main Street
Bolton, MA 01740

Date of Inspection: _____

Homeowner Name: _____

Address: _____

Inspector Name: _____

Address _____

City _____

State _____ Zip _____

Length Of Line: _____

Condition of Line:

Number of Cleanouts: _____

Condition of Cleanouts:

Condition of Leaching Area:

