

**MILLIS BOARD OF HEALTH  
SUBSURFACE SEWAGE DISPOSAL SYSTEM REGULATIONS**

Revised: June 14, 2006

Effective: June 20, 2006

(Under Chapter 111, Section 31, of the General Laws)

Title 5 of the State Environmental Code was *substantially revised and went into effect on March 31, 1995 (and was further revised April 21, 2006)*. Where the provisions of this Code are stricter than existing regulations, it, the Code, supplants the existing regulation. Where a local regulation is stricter, the local regulation prevails. The State Environmental Code has the force of State Law. These rules and regulations are an addition to the State Environmental Code including more stringent local Board of Health requirements *due to local conditions*. In the case of *upgrade* to an existing subsurface sewage disposal system, (aka on-site septic system, or septic system) Title 5 shall be the standard applied in the Town of Millis, *except where noted\**.

1. DEFINITIONS: For the purposes of these regulations.

ABANDONMENT: Any existing property that is currently served by an on-site septic system that receives approval for, and connects to the municipal sewer or upgrades its existing on-site system, must properly abandon the pre-existing septic system. Permitting, fees and inspections are required from the Board of Health for the abandonment process.

ABUTTER: Any adjacent property that touches the site or is located directly across the street from the frontage of the site. Assessor's certification for abutters located within one hundred (100) feet should meet these criteria.

AGENT: An Agent of the Board of Health is any person or person(s) authorized by the Board to act under these regulations. The agent may not vary these regulations without specific approval. Wherever reference is made to the Board of Health it shall mean the Board of Health or its Agent.

DEP: The State of Massachusetts Department of Environmental Protection.

DESIGNER: A Professional Engineer or Registered Sanitarian licensed in the State of Massachusetts.

DWELLING: A privately or publicly owned permanent structure for residential occupancy.

FACILITY: A privately or publicly owned permanent structure for commercial or community use.

REMAINDER PROPERTY: An original piece of real property that is served by an on-site septic system or cesspool, at which the land is proposed for division or sub-division. The remainder property is the portion which remains with the original dwelling or facility\*.

REPAIR: A repair of a minor component to an otherwise properly working on-site septic system, shall include but not be limited to:

*building sewer replacement, delivery pipe replacement, D-Box replacement and/or, and septic tank replacement.*

UPGRADE: *An upgrade is the total replacement or upgrade to an existing system due to failure.*

2. GENERAL REGULATIONS:

- A. The installation of domestic garbage grinders is prohibited in any structure or *facility* utilizing an on-site septic system. *This regulation shall apply to new construction as well as upgrades of existing septic systems\*.*
- B. Refer to the Millis Board of Health Water Supply Regulations for location criteria for wells, *including offset requirements.* When septic system plans reflect a proposed well, a well application and the well permit fee must be submitted along with the septic system application.
- C. Swimming Pools, *(in-ground)*, shall not be less than twenty-five (25) feet from the closest proximity of any part of any sewage system for all construction. *(Above-ground swimming pools must maintain a ten-foot offset from all septic system components, including piping).*
- D. The Board of Health, in reviewing all proposed water and sewer facilities to be located in the Special Flood Hazard District established under the Zoning By-Law, shall require that new and replacement septic systems or other sanitary sewer systems be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters.
- E. Permanent easements are to be submitted to the Board of Health for any portion of a septic system construction that is filled, graded or placed on property/lot other than the property/lot on which the associated dwelling, *or facility*, is located. The permanent easement is to be an attachment to the deeds of the affected lots, and copies of the recordings at the Norfolk County Registry of Deeds are to be submitted to the Board of Health before approval can be gained.
- F. Lowering the water table through the use of interceptor or curtain drains to permit marginal or unacceptable conditions to be improved to meet minimum requirements for the installation of new subsurface sewage disposal systems is prohibited.
- G. Existing elevations of lots immediately abutting each lot being applied for should be noted on the plot plan, when possible.
- H. *All proposed drainage shall stay on the lot to be served, and directed away from abutting lots. All final grading shall be completed as to not create any adverse drainage onto abutting properties. Mounded systems may require additional drainage engineering and construction in order to accomplish this requirement.*
- I. The installation of cesspools or leaching beds, for new

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construction, is prohibited.

- J. Any variances requiring approval by the Department of Environmental Protection (DEP) must first be approved by the Board of Health (BoH) prior to application to DEP.
- K. Multiple Unit systems: There shall be a separate septic system for each dwelling or facility. A dwelling, or facility, shall not contain more than a maximum of either five (5) two-bedroom units or the equivalent of ten (10) bedrooms.
- L. Abandonment of Existing Septic Systems\*: See definition. A written certification of abandonment is to be provided to the Board of Health within seven (7) days of the municipal sewer connection. The on-site septic system is to be properly abandoned by pumping out and removing all septage waste and all parts with voids (i.e., septic tank, pits, cesspools, etc.) are to be crushed or filled with crushed stone or gravel in compliance with 310 CMR 15.354.

3. PERCOLATION TESTS AND DEEP HOLES:

- A. Two (2) soil percolation tests and two (2) deep hole tests will be performed at the site of each soil absorption system site. These tests are to be made by DEP-licensed soil evaluator, and shall be witnessed by an Agent of the Board of Health. See item D below.
- B. No percolation rate greater than thirty (30) minutes to the inch will be acceptable to the Board of Health.
- C. The Board reserves the right to enter and order, at the owner's expense, percolation tests and observation pits on the property after a permit has been issued in the event the Board believes soil composition may have changed or the percolation test is questionable or borderline.
- D. The applicant must submit a proposed testing site plan showing shaded areas of possible soil test locations, any and all wetlands within 100 feet, watercourses within 200 feet and all wells within 125 feet of any part of the potential septic system site with the soil test application. Any and all wetlands locations shall be approved by the Millis Conservation Commission, (by the method they deem appropriate), prior to Board of Health testing. Those lots that do not exhibit any wetlands within two hundred feet of proposed soil testing, must include a certifying statement on the proposed perc test site plan that states, "There are no wetlands located within 200 feet of the testing site as shown," and shall be stamped, signed, and dated with the original stamp and signature of the engineer or sanitarian of record. Within thirty (30) days after soil tests having been attempted or completed, the DEP Soil Evaluation Forms and a plot plan (in scale) shall be submitted to the Board of Health showing exact locations of these soil tests. The plan shall include failing as well as passing deep hole and percolation test sites. All expenses shall be borne by the applicant.
- E. All percolation test applications shall designate whether a single dwelling or multiple dwellings are to be built.

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- F. On-site investigations shall consist of both percolation tests and deep holes tests being done at the same time.
- G. *No testing shall be allowed in frozen soil.*
- H. Percolation tests and deep holes will be *valid* for a five-year period with no extension to be granted unless approved by the Board of Health.
- I. All *new construction* percolation tests and deep hole *soil evaluation* tests will be done between *September 15<sup>th</sup> and May 30<sup>th</sup>*. The dates may be limited at the discretion of the Board of Health. All groundwater monitoring pipes and their installation shall be approved and witnessed by the Board of Health or its Agent and shall be placed in accordance with the DEP policy for groundwater monitoring. *Four-inch PVC pipes shall not be used for official groundwater monitoring pipes.*
- J. Moat testing or "de-watering" will not be allowed for percolation tests.
- K. Deep observation holes are not to be left unattended once excavated. The deep observation holes shall not be filled in until they have been inspected by the Board of Health. After the tests are completed and all data has been recorded, the test holes and pits shall be immediately re-filled.
- L. *Soils shall be evaluated in accordance with the State Code. Soils exhibiting excessive aggregate, (more than 65%) and stratified layers, (less than four feet in thickness) may be deemed inappropriate, for use for an onsite septic system, by the Board of Health, Director, or agent.*
- M. Groundwater adjustments shall be added to observed groundwater observations. The groundwater adjustments will be determined by the US Geological Service data, (Frimptor method) and used at the discretion of the Board of Health, Director or Agent.
- N. The following procedures for conducting percolation tests shall apply for all percolation tests.
- i. Percolation rates shall be expressed to the nearest integer minute, (always rounding up).
  - ii. The results of the percolation tests shall be tabulated on an inch by inch basis and that data shall be inscribed on the design plan on the *and percolation test report forms*. If the rate of water drop is not uniform, in the opinion of the Board of Health representative, the test shall be repeated at the expense of the applicant until such uniform rate is achieved.
  - iii. The *long term acceptance rate*, as designated in Title 5, shall not be interpolated. Measured values shall be rounded up to the next percolation rate value as stated in Title 5.

4. SPECIFICATIONS:

- A. A certified plot plan must be filed with the Board of Health showing the proposed location of a septic system *in relation to the legal boundaries of the lot*. Septic plans shall be drawn to a scale of 1" to 20'. Carelessly drawn or *illegible plans* will not be accepted.
- B. The *septic plan* must show the property to be served (outline of a lot with accurate dimensions), locus, the location of proposed sewage facilities, sources of water supply, statement as to which zone of the groundwater protection district the system lies, percolation test sites, (*including those which may have failed*) and rates, observation pit sites and *soil profiles*, elevations and contours of the property, number of bedrooms, name of applicant, name of owner, address or lot number of site, (*including the Assessor's Map & Lot number*), all variances sought, design calculations, all wells within 125' (downhill) from a proposed leaching area and all those within 100' (uphill) from a proposed leaching area reserve area, *location of all bordering vegetated wetlands*, streams, swamps and drainage easements within one hundred (100) feet of the house; offset statements relative to the resources listed on the State GIS maps known as "Areas affected by Title 5;" also, whether it is a basement or a slab construction and distance of the on-site system from foundation as well as all lot lines. *Sites located in the Flood District must show* the mean elevation above sea level and not an assumed elevation plus location of benchmark within fifty (50) feet of the leaching facility but not within the leaching facility or limit of excavation. All other on-site septic system plans may show an assumed Benchmark which must be located within seventy-five (75) feet of the soil absorption system. Any transferal of Benchmarks must be authorized and documented in writing by the designer.
- C. One initial *proposed on-site septic plan is* to be submitted with the completed *Disposal System Construction Permit (DSCP 8-1/2" x 14" two-part carbonless)* application. Applications shall be made on such form as prescribed by the Board of Health and DEP. *If the initial submittal requires a revision, then four copies of the revision shall be submitted, with all changes highlighted on one copy. If the initial submittal is approved, then three additional copies shall be submitted in order to complete the file. All copies submitted must contain the designer's original stamp and signature.*

5. SEPTIC TANKS, LEACHING AND DESIGN:

- A. The minimum design criteria is to be for a three-bedroom dwelling as defined by Title 5 *unless a deed restriction is approved by the Board of Health and recorded in the appropriate Registry of Deeds*. All septic systems shall consist of a septic tank, a distribution box or *pressure manifold*, and a *soil absorption area*, or leaching area along with an expansion leaching area, or reserve area. There shall be a minimum of one hundred (100) lineal feet of pipe plus such additional length as indicated by the percolation test rate.

The area above any part of the *on-site septic system* shall remain permeable and shall have no construction upon it.

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- B. Reserve area spacing. Clear spacing between leaching trenches shall be a minimum of nine (9) feet (minimum distance between walls of adjacent trenches). This shall not be required for repairs of existing systems as of the effective date of this regulation. The difference in elevation of successive adjacent leaching trenches shall be a maximum of twelve (12) inches and is allowed provided the pipe cover is two (2) feet.
- C. The expansion, or reserve, area shall be placed between the leaching trenches with the exception of one trench which must lie outside the area.
- D. The maximum daily flow for a household for design purposes shall be based on water use of 110 gallons per bedroom per day.
- E. *The minimum size external grease trap shall be 1500 gallons pursuant to the Millis Board of Health "Fats Oils & Grease" Regulations.*
- F. Septic tanks shall be no closer than fifteen (15) feet to any property line and ten (10) feet from cellar foundations and swimming pools.
- G. Leaching facilities shall be located no closer than twenty (20) feet from the boundary line.
- H. Two staged pumps, (automatic sequence for high water level, low water level) are to be provided for all septic systems that require a pump design that is placed after the septic tank. There shall be an alarm installed and arranged that shall sound when the high water level pump has activated due to failure or inability of the low water level pump to perform. The alarm sounding device shall be installed and clearly audible within the dwelling or principal building. *This requirement shall be applicable to upgrade conditions and repairs to existing systems as well as new construction\*.*
- I. *The maximum allowable depth of cover material, including topsoil, over a soil absorption system is three (3) feet.*
- J. *Pressure distribution is highly recommended for all systems that require a pump(s) to lift the effluent to the required elevation. Operation and maintenance shall be conducted on pressure distribution systems in accordance with BoH policy.*
- K. *An effluent filter is required to be placed in the outlet tee inside the septic tank\*. A manhole to grade, with a locking or bolted accessible cover, is required over the outlet portal\*.*
- L. *Building Permits: For New Construction, no Building Permit, foundation permit, special building permit, or plumbing permit shall be issued until a Disposal System Construction Permit and evidence of potable water has first been obtained from the Board of Health. Building Permit sign-offs for remodeling and/or additions of existing homes must be in accordance with Title 5, 310 CMR 15.000.*

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See BoH policy.

6. CONSTRUCTION INSPECTIONS & AS-BUILT PLANS: The Board of Health and/or its Agent shall perform inspections of newly installed on-site septic systems, (for new construction, upgrades and/or minor repairs).

A. Inspection intervals:

- (i) after the removal of the existing topsoil, subsoil, or other deleterious material as required; and
- (ii) after all the piping and components have been installed, but not yet covered over. Additional inspections may be required on a case-by-case basis. See BoH policy.

B. Conditions required for inspections: The top of all leach pipes, solid pipe from house to tank and to distribution box must be left uncovered. The manhole cover and inspection portals over baffles must be free of asphalt seal and be loose for easy removal. Five gallons of water must be available to test the distribution box. Heavy covers must be removed from the tank before inspection. The installer of record must be present at the inspection appointment.

No inspections will be conducted by the Board of Health for on-site sewage systems if snow is not uncovered.

C. As-Built plans are required showing the location of the well and exact location of an on-site sewage disposal system after such system has been installed. *Dimensional ties shall be included from permanent features to the septic tank manholes, D-Box, and soil absorption system distal corners.* This system location and installation plan will be submitted on a new plot plan signed by the Designer attesting that the system has been installed in accordance with the approved plan. (A separate Designer's Certificate of Compliance is ALSO required.) This As-Built plan will remain on file with the Board of Health. A second certified As-Built plan is required to show elevations of final grading and loaming & seeding as proposed on the original plan. A combined location As-Built plan & final grading As-Built plan is allowed.

7. RESPONSIBILITY: Issuance of a Board of Health permit does not relieve the contractor and/or builder of his or her responsibility to conform to the Millis subsurface sewage disposal system rules and regulations, including policies of the Board of Health office.

8. RESERVED:

9. TITLE 5 INSPECTIONS:

A. *Septic tanks must be pumped at the time of inspection.*

B. *Cesspools shall be evaluated with BoH policy.*

- C. *The depth of the bottom of the soil absorption system (from the top of the grade) must be noted on the inspection form. See the attached policy.*
- D. *Any unsecured or "to-grade" opening of any part of the existing septic system or cesspool shall be documented and secured with locking or bolted manhole(s) and cover(s) by a licensed installer.*
10. SEWER: *The owner or occupant of any building, (dwelling or facility), which is located upon land abutting on a public or private way in which there is a municipal sewer, shall within two years of a failing Title 5 Inspection, 310 CMR 15.300-15.340, connect the same therewith, by sufficient sewer connection. Any proposed sewer connection shall be made in accordance with State and local rules and regulations, including but not limited to policies set forth by both the Millis Board of Health, the Millis Department of Public Works and Millis Board of Selectmen. Applications for sewer connections and septic abandonments are required at both the Board of Health Department of Public Works offices with the applicable fees.*
11. SUB-DIVISION of LAND IN UNSEWERED AREAS: *All real property that is sub-divided must meet the requirements of the State Code, 310 CMR 15.010.*
- A. *The property owner must prove that the remainder property, if served by a septic system, can support necessary maintenance and a subsequent fully-complying Title 5 system if the original system should fail. At the time of land division, the Board of Health may request percolation or soil testing and any other engineering necessary, with all expenses borne by the applicant, to prove that the remainder property can support a fully complying septic system.*
- B. *Interdepartmental sign-off forms may be required at the time land division.*
12. WASTE WATER: *Pumping, transport, and disposal of wastewater are regulated as stated below.*
- A. *All commercial septic system pumping companies must be registered with the Board of Health and such companies shall supply their customers with appropriate educational materials concerning the function and proper use of septic systems. The Board of Health shall license such companies and shall set reasonable fees for doing so.*
- B. *All such companies shall discharge their waste at a licensed Wastewater Treatment facility and shall supply proof of such approval to the Board of Health before the Board issues a permit to operate in Millis. All pump out slips (duplicates) are required to be filed at the Millis Board of Health.*
13. VARIANCES:
- A. *Applicability: Any person wishing to request a variance to these regulations may do so by submitting a written request to the Board of Health Chair or Director and state the specific variance being requested and the reason or need for the variance.*

- B. *Process:* Upon receipt of the written request, the Director or Administrative staff will contact the applicant and provide the date/time/place of the public hearing at which the variance request will be heard. The applicant must then prepare abutters notifications with the following information: name of the property owner, locus address and assessor's map/parcel identification, specific variance request with supporting documentation, and the date/time/place of the hearing. The notifications must be sent at least ten in advance of the hearing and must be sent by return receipt certified mail. The applicant or applicant's consultant must attend the hearing and present the certified abutters' list, a copy of the notice, and receipt of mailings of the notices. Upon examination by the Board of Health, and proof that this process has been followed, then the Board of Health may open the hearing. The applicant's request will be heard, the Board may ask questions, and the abutters and/or public may ask questions prior to a decision of the Board of Health. Lack of information may require the hearing to be continued until the Board has the appropriate information to make a decision.
- C. *Continuation of Hearings:* In the case of incomplete information or additional information requested, the Board will give the applicant the following choices:
- i. Denying the variance due to insufficient information, thus closing the Hearing; OR
  - ii. Accepting a request from the applicant to continue the Hearing in order to submit additional information. The Board will give the applicant the date and time of the next meeting. The additional information must be submitted to Board of Health office ten days in advance of the scheduled meeting at which the Hearing will be continued.
- In the case of multiple continuations, it is the applicant's responsibility to contact the Board of Health office to determine the next date and time of the subsequent meeting. It is the applicant's responsibility to communicate to the Board of Health staff if they intend to attend the meeting or wish to continue or close the hearing.*
- D. *Decision of the Board:* A written decision will be provided by the Board of Health office. The decision of the Board may be appealed as outlined below and any further decision may be appealed to any Court of competent jurisdiction as provided for by the laws of the Commonwealth.

14. APPEAL PROCEDURE: Any person affected by a decision of the Board of Health shall be entitled to a hearing before the Board of Health. Such person shall file with the Board of Health within fourteen (14) days a written petition requesting such a hearing.

An appeal hearing will be considered only under the following conditions:

- 1) That there is new data to present; or
- 2) That there is at least a second professional consultant's

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