

WEST NEWBURY BOARD OF HEALTH  
REGULATIONS FOR PERCOLATION TESTING AND SEPTIC SYSTEMS

Adopted as revised on

**JUN 28 2011**

, effective

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Pursuant to the provisions of Massachusetts General Laws Chapter 111, Section 31, the Board of Health is authorized to make reasonable health regulations. Pursuant to that statute and 310 Code of Massachusetts Regulations 15.000, the Board of Health may adopt regulations relating to the minimum requirements for subsurface disposal of sanitary sewage which exceed the minimum requirements as provided by the state environmental code. The Board of Health finds that the following local conditions and/or reasons exist for the adoption of those provisions of the following regulations which exceed the minimum requirements of the state environmental code: the large number of private drinking water wells, numerous wetland areas, the extensive network of stream channels that flow into public water supply reservoirs, numerous areas that are shallow to ledge, various landscape conditions with high ground water, soils with slow percolation rates, and ground water protection.

The reason the board proposed these revisions is to protect the environment while allowing the home owner relief from our stringent previous setbacks requirements. It is our intention that proper siting consistent with the protection of the local conditions listed above be paramount to aesthetics.

I. Percolation Testing / Observation Pits:

A. Perc season for new construction will be April, May, June, September, October & November. Other months will require the Board of Health's approval.

B. Scheduling:

1. Applicants must submit an application and fee to the Board of Health in order to be scheduled for a perc test.

C. Percolation test and observation pit requirements:

1. The following rates will be considered passing; 40 min/in or faster
2. Map locations: All tests, both failed and passed, will be survey located and provided on a plan and submitted to the Board of Health within thirty (30) days after the testing.
3. Official perc tests and deep holes that were conducted according to the 1995 Title V standards and meet the current local regulations are good indefinitely, unless the Health Agent and/or Board of Health determines that new testing is required. Locations and data of official tests need to be on file with the Board of Health
4. Trench permits are required pursuant to M.G.L. c. 82A 1 and 520 CMR 7.00 et seq to conduct perc tests and/or deep holes.

II. Minimum Design Requirements:

- A. The location and installation of each subsurface sewage disposal system shall be such that, with responsible maintenance, it will function in a satisfactory manner, and will not create a nuisance, or discharge into any watercourse. In determining a suitable location for the system, consideration shall be given to the size of the lot, slope, natural and adjusted drainage, existing

and known future water supplies, depth to groundwater, presence of impervious material, soil classifications, and reserve areas. The subsurface disposal system shall be wholly contained within the lot, including any fill or excavation associated with the system, unless the requirements in section II.J (easements) are met. No permit shall be issued until the Health Agent or Board of Health designee has witnessed percolation test and deep observation pits; the Health Agent has performed an on site inspection; and, the Board of Health has approved the disposal system plans.

**B. Design flow:**

1. The system will be designed based on Title V flows.

**C. Multiple use:**

1. The use of a subsurface sewage disposal system by more than one lot is prohibited, unless the project was approved through an Open Space Preservation Development (OSPD) as set forth in the Zoning Bylaws of the Town of West Newbury with amendments through October 25, 2010 or latest revision or such project was subject to the provisions of MGL c. 183A (the Massachusetts Condominium Enabling Act).
2. Applicant must prove that a conventional septic system, including a reserve area could be built for each lot prior to approving any shared system & must meet all requirements in 310 CMR 15.00.

**D. System setbacks:**

1. System components will meet the following setback requirements:

**Table 1**

	Septic Tank, Holding Tank, Pump Chamber, Treatment Unit	Leaching Facility (SAS)
Bordering Vegetated Wetland (BVW), Inland & Coastal Banks, as defined by 310 CMR 15.002 and further defined by M.G.L. c.131 s.40 and 310 CMR 10.55(2)	25 (ft)**	100 (ft)****

**Table 2: Conditions required to over come the 100' setback between wetlands and SAS.**

Design Flow	Wetland Setback	Requirements
>2000 gal/day	50 - 100 (ft)	Nitrogen reducing pre-treatment system
<2000 gal/day	75 - 100 (ft)	Pre-treatment required, does not need to be Nitrogen reducing
<2000 gal/day	50 - <75 (ft)	Nitrogen reducing pre-treatment system

**\*\*Any tank or structure that is less than 50' to wetlands will need to be vacuum tested and be equipped with rubber boots.**

**\*\*\*\*Prior to the above setbacks being granted, applicant must prove that the 100' setback to wetlands can not be obtained, without considerable hardship, which hardship relates to the size, shape, topography or soil conditions of the lot and not to the personal status of the applicant. An alternative analysis must be provided and approved by the board prior to the above setbacks being granted.**

E. All tanks under 2500 gallons must be monolithic. All other tanks, pump stations, manholes, etc. must be vacuum tested on site.

F. Garbage disposals:

1. No garbage disposals will be allowed.

G. Venting:

1. All soil absorption areas require proper venting.
2. Charcoal filters are required on all vents.

H. Impervious barriers:

1. Slope requirements: Before an impervious barrier will be approved, the design engineer must show that the lot meets Title 5 and/or local requirements pertaining to grading for both proposed and reserve systems. A plan showing the 15' horizontal setback between the edge of the SAS and adjacent side slope must be provided. If the slope requirements cannot be met, then an impervious barrier will not be allowed.
2. Construction: All impervious barriers shall consist of a HDPE membrane with a minimum thickness of 40 mil.

I. Drainage:

1. The proposed grading of the lot on which the septic system is located shall divert surface water away from the dwelling so as to prevent standing water and soil saturation detrimental to the dwelling and sewage disposal systems on adjacent lots. Conditions which would result in prolonged standing water within the immediate vicinity of the dwelling or individual sewage disposal system in any season is not acceptable, and the Board of Health shall be satisfied that such conditions do not exist.

J. Easements on adjacent lots:

1. Abutting lots of different ownership: Plans for a subsurface disposal system which requires excavation and/or fill on abutting lot(s) of non single ownership shall show the fill required, the limit of excavation on abutting lot(s), and, accompanied by the plan, the applicant shall submit to the Board of Health written proof of negotiations of a permanent construction and maintenance easement located on the abutting lot(s). Such an easement shall be shown on the disposal system plan with distances and bearings.
2. Any easement must be approved by the Board of Health and recorded at the Registry of Deeds prior to the issuance of a permit.

### III. Septic System Plans:

A. Four sets of plans shall be submitted to the Board of Health, along with an application for a Disposal Works Construction Permit and a check covering the fees. No plan will be accepted or reviewed without Town fee. Plans dropped off after administrative office hours will be stamped and recorded on the next business day.

B. Topography:

1. Every effort shall be made to base the topographical map on the latest revision of the NGVD datum, or noted as assumed.

C. Design Plans: Designs shall be on 24" x 36" paper. For component repairs, smaller paper size may be allowed at the discretion of the Board of Health. Design plans shall include, but not be limited to, the following information:

1. Title Block:

- a. Owner's name, lot number, street
- b. Engineer's name, company and phone number
- c. Applicant's home address and telephone number
- d. Date
- e. Certification stamp by designer, as permitted under Title 5
- f. If revision plan, revision number and revision date

2. Plan view:

- a. Scale: 1" = 20'
- b. Topography at 2' contours, except where 1' contours are necessary to define drainage patterns around system and dwelling, and slope breakout.
- c. All survey information pertinent to the lot, lot area, lot number, all distances around lot borders, stone wall boundaries, all known easements, existing and proposed.
- d. All present abutters
- e. All wells and other leaching systems, including those on abutting lots, within 150' of system and well on subject lot
- f. Edge of wetlands as defined in 310 CMR 10.00 (wetland regulation)
- g. Edge of street ROW and edge of pavement
- h. Locus plan
- i. North arrow
- j. Bench mark, within 50 to 75 feet of system
- k. All percolation test and observation pit locations and numbers, failed as well as passed
- l. Driveway
- m. All water system lines
- n. Table of Invert Elevations

3. Profile & Cross Section View

- a. Scale 1" = 2' vertical and 1" = 20' horizontal
- b. Information must include, but not be limited to, the following:
  - (1) Basement floor elevation
  - (2) Top of foundation elevation
  - (3) Invert elevations of inlet and outlet of septic tank
  - (4) Invert elevations of inlet and outlets of distribution box
  - (5) Invert elevations of pipes at beginning and end of leaching system
  - (6) Bottom of stone elevation
  - (7) Distances from foundation to tank, tank to d-box, d-box to leaching system
  - (8) End & side of system profile/section, with elevations extending at the minimum to the end of proposed fill
  - (9) Existing and proposed grades: Finish grading should show a slope no greater than 3 to 1.
  - (10) Water table or ledge below the bottom of the leaching area
  - (11) 2% slope (min) over system to drain

4. Other Important Information:

- a. Distances and dimensions required on plan:

- (1) System length and width
- (2) Distance foundation to septic tank
- (3) Foundation to property line
- (4) System to property line
- (5) System to all wells within 150 feet
- (6) System to wetlands, if any

b. Percolation test data:

- (1) Percolation test number and date
- (2) Rate, in minutes/inch
- (3) Shelf depth
- (4) Perc hole depth

c. Observation pit data:

- (1) Number and date
- (2) Soil log
- (3) Top elevation
- (4) Bottom elevation

d. Design calculations:

- (1) Percolation rate
- (2) Gallons per day
- (3) Side and bottom area of leaching facility
- (4) Legend
- (5) Material notes
- (6) General notes
- (7) Any additional information deemed necessary by the Health Agent or Board of Health

IV. Site Preparation and Certified As-Builts by Engineer / Sanitarian:

After plan acceptance by the West Newbury Board of Health, the design engineer / sanitarian shall be held accountable and responsible for the following:

- A. Laying out the foundation and the leaching system with grades.
- B. Installing an on site bench mark: Two (2) bench marks are required when the leaching system is more than 150 feet from the foundation, or 20 feet or more below the foundation.
- C. The design firm must prepare the certified as-builts, unless a hardship is presented to and approved by the board.
- D. Disposal system as-built, required before the Board of Health will allow occupancy of a building, shall show at least the following:
  1. Scale 1"=20'
  2. Foundation, with dimensions and ties to sidelines
  3. Septic tank and d-box, with ties to foundation
  4. Leaching system, with dimensions and ties to foundation and property lines
  5. Well, with ties to leaching system and septic tank
  6. Top of foundation elevation
  7. All pipe invert elevations - at foundation, inlet and outlet of septic tank, inlet and outlet of d-box, at beginning and end of leaching system
  8. Location and grades of barrier, if any

9. Top and toe of slope, when required by Health Agent in cases of major sloping
10. Location of water service lines
11. North arrow
12. Owner's name
13. Lot number and street
14. Engineer's name, address and phone number
15. Installer's name, address and phone number
16. Date of field certification
17. Date of plan
18. Any other information deemed necessary by the Health Agent
19. The certified as-built shall be submitted to the Board of Health no later than 10 days after field certification.

E. Installer must sign the Certificate of Compliance, at the Board of Health office.

V. Installers License:

- A. Installer's exams will be given by appointment only. Call Board of Health office for dates & times. Prior to taking the exam, the applicant must provide the following documentation 1) A copy of a current license from another municipality or proof of two years work experience with a septic system construction company, and 2) Provide two positive references from persons experienced in the installation, maintenance and repair of septic systems such as engineers, contractors or public officials.
- B. There is a \$50 dollar fee to take the exam, if a passing score is received, then a \$150 fee will be required to receive the license. If the applicant fails the exam, then the test can not be retaken for another 3 months. The licensed individual must be actively involved in all phases of the installation of the septic system. Construction of a septic system shall be performed in accordance with the approved plans, 310 CMR 15.00 and any other requirements set forth by the BOH. Failure to comply with the above requirements and/or conduct work with good construction practices shall constitute a basis for revocation of the installer's license.

VI. Maintenance:

- A. Properties served by alternative technology septic systems need to have an Operation and Maintenance Contract in place and recorded at the Registry of Deeds (if required), and filed with the Board of Health office prior to the issuance of a Certificate of Compliance. Contracts need to be for a minimum of 2 years.

VII. Installation of Septic System:

- A. Installer shall be licensed by the West Newbury Board of Health.
- B. The installation of a septic system shall not occur when frost is in the ground as determined by the Board of Health.
- C. Requirements before work begins:
  1. System location shall be staked out by the design engineer.
  2. Installer shall notify the Board of Health at least 24 hours before beginning site work. Failure to do so may result in loss of installer's license.
- D. Work site specifications:

1. Stone with clay or silt, or improperly washed stone, will not be allowed. Every effort will be made to remove stone directly from the truck to the system. If the stone must be stockpiled prior to installation, it will be placed on a hard surface. Stone mixed with dirt will not be used in the system.
2. Cast iron or SCH 40 PVC pipe shall be installed from the foundation to the septic tank.
3. SCH 80 PVC pipe is required under all driveways or where an H-20 wheel load is anticipated.
4. PVC pipe, where it enters into any concrete structure, shall be watertight and sealed with hydraulic cement and coated with a lasting, flexible, waterproof sealant.
5. Backfilling -- The contractor will not backfill the system until the design engineer and Health Agent have made their inspections and certifications.

VIII. Inspections:

A. Notification

1. The installer shall notify the Health Agent and the design engineer prior to inspections.

B. Inspection timetable:

1. Before construction of system
2. Bottom of system, after removal of top and subsoil prior to and during installation of sand.
3. Before and after installation of leach area, septic tank, d-box, pump chamber, and all other piping, as well as barrier.
4. After backfilling.

C. Pump station inspection:

1. After installation, by the Health Agent, and, if required, also by the Plumbing and Wiring Inspectors

IX. Structure Alterations:

A. Reserve area:

1. The area reserved for future expansion or replacement of the disposal system shall be kept open and shall not be built upon. Additions to the dwelling or inground swimming pools may not be constructed so as to preclude the expansion or replacement area from conforming to the minimum distances established in Title 5 or these regulations. Any infringement may result in the requirement of a new disposal system.

B. Additions:

1. Before an addition can be made to an existing structure, a plan shall be submitted to the Board of Health showing location, elevation, and offsets to ensure that there will be no encroachment on the leaching system or the reserve system.

X. Fees:

- A. The Board of Health will set appropriate fees for services and permits, to be posted in the Board of Health office, to be reviewed at least annually, and to be amended as deemed necessary. Fees must be paid according to the fee schedule.

XI. Severability:

- A. Should any section, subsection, paragraph, sentence, or word of this regulation be declared invalid for any reason whatsoever, that decision shall not affect any other portion of this regulation, which shall remain in full force?

XII. Conflict of Regulations:

- A. In any case where a provision of this regulation is found to be in conflict with a provision of any zoning, building, fire, safety, or health code of the Town of West Newbury or the Commonwealth of Massachusetts, the provision which in the judgment of the West Newbury Board of Health establishes the higher standard for the protection and promotion of the health and safety of the people shall prevail.

WEST NEWBURY BOARD OF HEALTH

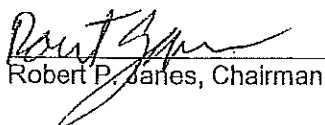
FEE SCHEDULE

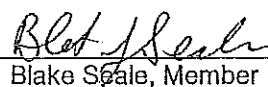
Under the provisions of 310 CMR 11.00, Environmental Code Title I, the West Newbury Board of Health adopted the following fee schedule at its meeting on:

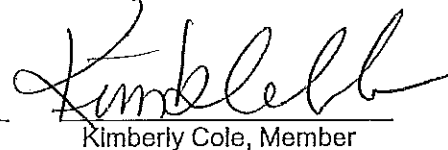
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A. Percolation test (4 hours)	
1. Repair/soil test	\$150
2. New construction/soil test	\$200
3. Additional testing	\$35/hr
4. Trench Permit	\$50
B. Septic System Design Review	
1. New design up to 2000 gallons (includes 2 revision reviews)	\$300
2. For each additional 1000 gallons add	\$50
3. Repair design (includes 2 revision reviews)	\$200
4. Third revision to submitted design (and any additional reviews)	\$50
5. Emergency/Component repair	\$50
C. Licenses	
1. Septic Installer	\$150
2. Pumper and Hauler	\$75
3. Well drilling permit, plan review, and inspection	\$200
D. Misc.	
1. Septic Installers Exam	\$50

Effective Date: **JUN 28 2011** by vote of the West Newbury Board of Health:

  
Robert P. Jones, Chairman

  
Blake Seale, Member

  
Kimberly Cole, Member