

# Mill River consulting

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## TITLE 5 OF MASSACHUSETTS ENVIRONMENTAL CODE APRIL 2006 UPDATE

### SUMMARY OF CHANGES

Consisting of a brief description followed by the code section.

[Note that some references are repeated in more than one section as may be appropriate]

#### Existing System Inspection

- Excludes the inspection requirement for existing systems when transferring residential property between parents, children, siblings or certain types of trusts. *301(4)*
- Clarifies the length of time a Certificate of Compliance is valid in lieu of a septic system inspection to three years if the system was pumped at least once during the third year. *301(4)*
- Indicates that all cesspools larger than 2,000 gallons per day are not acceptable. *303(3)* and *304(5)*
- Requires copies of pump out records to be appended to inspection reports. *302(2)*
- Shared systems inspected every 3 years instead of annually. *301(7)*
- Inspections are required when facilities are divided or combined. *301(8)*
- Inspection forms for official inspections must be completed in their entirety. *301(10)*
- Describes how to refute an inspection report which was not found to be accurate. *302(3)*
- Inspection must be completed in compliance with the DEP Guidance. *302(8)*

#### Licensing and Continuing Education

- Defines Training Contact Hours. *002 (Training Contact Hours)*
- Allows people with more types of college degrees to be eligible to become licensed as Soil Evaluators. *017(2)*
- Clarifies and expands eligibility to become a system inspector. *340(1)*
- Requires license renewal and training for system inspectors and provides better enforcement against fraudulent inspectors. *340(7) 340(8) 340(12) and 340(13)*
- Requires license renewal and training for soil evaluators and provides better enforcement against fraudulent soil evaluators. *017(4) and 017(7)*

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## Site/Soil Evaluation

- Sites may utilize the "B" soil horizon for new construction and for upgrades without needing special permission. 002 (*unsuitable material definition*)
- Allows people with more types of college degrees to be eligible to become licensed as Soil Evaluators. 017(2)
- Clarifies which types of soil are acceptable beneath a soil absorption system. 002 (*Unsuitable material*)
- Clarifies the minimum number of test holes required at a site. 102
- Eliminates performance of an overnight soak prior to a percolation test for slower absorbing soils. 105
- Clarifies the need to describe the velocity zone boundary in a site evaluation. 106(1)

## Design and Plan Review - Conceptual

- Removes some requirements for connecting to a municipal sewer system when a site can use an on-site wastewater system. 004(3)
- Clarifies the rules regarding shared systems for multiple properties and also when new shared systems are created or eliminated. 010 and 011
- Defines cluster developments and encourages or allows shared systems for cluster developments with less permitting required. 002 (*Cluster Development*) and 292(1)
- Clarifies that the designer is the person who created the design, or for the purposes of an as-built and Certificate of Compliance, can be a separate licensed designer who oversees construction. 002 (*Designer*)
- \* ➤ Clarifies pressure dosing (pump to a d-box) versus pressure distribution (pump to a manifold). 254(1) and 254(2)

## Design & Plan Review – Details Regarding Setbacks

- Defines foundation drain around a building. 002 (*Foundation Drain*)
- Clarifies how to define a Tributary to a Surface Water Supply. 002 (*Tributary to Surface Water Supply*)
- Clarifies how to define a velocity zone. 002 (*velocity zone*)
- Clarifies that setback distances requirements are the same for pump chambers and other tanks as they are for septic tanks. 211(1)
- Provides a setback from a foundation drain to on-site system components. 211
- \* ➤ Clarifies that no component of an on-site wastewater system may be placed on a different parcel, except for grading when an easement is provided. 211
- Requires depiction of sensitive receptors as listed for a distance of 100' beyond the regulatory setback and the indication of the tax map and lot on the design plan. 211(4)
- Clarifies that components must remain within the property even when seeking a Local Upgrade Approval. 405(1)

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## Design & Plan Review – Details Regarding Components

- Defines equalization basin for design of certain systems and requires their use at schools which are served with a treatment device. 002 (*Equalization Basin*) and 203(5)
- Clarifies how to address backwash from water filtration or filtration devices. 004(8)
- Exterior grease removal devices other than a grease tank specified in the regulations needs permission from the DEP. 230(12)
- Allows for shallow (ledge) tanks in certain types of upgrades. 223(2) plus LUA required
- Allows for fiberglass reinforced plastic and polyethylene septic tanks and pump chambers. 226(2)
- Allows use of geotextile fabric in place of peastone over a soil absorption system. 211(4) and 247(2)
- Allows use of effluent filters and requires manholes to grade when they are used. 227(7)
- Removes allowance of cast iron inlet and outlet tees.
- \* ➤ Pump chamber access covers shall be located at final grade. 231(5)
- Requires flows larger than two family dwellings to have dual pumps which are valved and also alternating. 231(6)
- Allows plastic distribution boxes to be placed on a mechanically compacted base and 6" stone bed. 232(2)
- \* ➤ An effluent filter is required prior to or inside a pump chamber. 231(10)
- \* ➤ Requires an inspection port at each soil absorption system. 240(13)
- Allows humus/composting toilets for general use and for new construction must show that a full system can be installed (except for some locations). 289

## Design & Plan Review – Details Regarding Flow

- Clarifies what is the existing approved capacity of an on-site system. 002 (*Approved Capacity*)
- Defines a building which is classified as a supermarket. 002 (*Supermarket*)
- Clarifies design flow requirements for different types of buildings such as home offices, single family condominiums, supermarkets, and housing for the elderly, and also allows for design flows to be approved when they differ from the actual flows. 203 and 203(6)
- Clarifies that design flow for an existing system is determined as listed on the most recent construction permit. 204

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## Design & Plan Review – Details Regarding Design

- Sites may utilize the “B” soil horizon for new construction and for upgrades without needing special permission. 002 (*unsuitable material definition*)
- Clarifies that recirculating sand filters are allowed to be used for nitrogen removal for all size systems. 202(2)
- Clarifies the ability and procedure to merge (aggregate) flows on a multi-parcel project to meet nitrogen loading standards. 216
- At least one copy of plans submitted must bear an original stamp and signature. 220(2)
- All piping, except the first 2' outside the distribution box, is to be designed to provide a minimum velocity of 2 feet per second when flowing full. 221(10)
- Tank inlet and outlet elevations shall be more than 12” above ESHGW but may be reduced by a Local Upgrade Approval. 227(5) and 405(1)
- Provides for reduced loading rate for pressure distribution and drip dispersal systems in Class II and Class II soils. 242
- \* ➤ Reduces maximum trench width to 3' and allows trenches to be 2x the width apart if a reserve area is not between the trenches. 251(1)
- Clarifies pressure dosing (pump to a d-box) and pressure distribution (pump to a manifold) and that the frequency of the pump cycle should be site specific. 254(1) and 254(2)
- Pressure distribution is required for systems with multiple soil absorption systems. 254(2)
- Allows greywater systems to be used for new construction with nitrogen removal credits, allows reduced size of SAS and in upgrades allows reduced distance from bottom of the SAS to the ESHGW with gray water systems. 262
- For Class III and IV soils with percolation rates greater than 60 minutes, cannot use a bed or field configuration. 249(4)
- Makes Title 5 consistent with the guidance document for barriers and retaining walls. 255(2)
- Clarifies wording related to review of alternative systems, and for design flow rates for non-typical settings. 283

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## Construction

- Clarifies that emergency repairs are only allowable by a licensed Installer and only after an assessment is performed. 353(2) and 353(3)
- \* ➤ Requires perimeter of soil absorption system to be staked and flagged from before construction until issuance of Certificate of Compliance. 246(2)
- Clarifies the types of pipe material acceptable in a soil absorption system. 251(5)
- Indicates solid piping may be SDR 35 in non-traffic areas and Schedule 40 in traffic areas. 221(5)
- \* ➤ All components are to be marked with magnetic marking tape prior to backfilling. 221
- \* ➤ Indicates the tanks and distribution boxes with risers shall have them within 6" of final grade and requires risers on all tank top openings and distribution boxes for systems buried greater than nine inches below grade. 221(13) and 228(1) and 232(3)
- Indicates the piping in a soil absorption system may be PVC schedule 40 or SDR 35, ABS pipe shall be schedule 40, or HDPE pipe shall meet ASTM standards. 251(5)
- Abandoned tanks may be filled with sand or other suitable material. 354(3)

## Post-Construction

- Clarifies that the designer is the person who created the design, or for the purposes of an as-built and Certificate of Compliance, can be a separate licensed designer who oversees construction. 002 (Designer)
- As-built plans only required if changes re made, otherwise design plan with dimensions to known structures can be submitted after construction. 021(3)
- Clarifies certain violations such as not complying with deed restriction, or building or using a system before it has been authorized or discharging sewage to the ground surface. 024

## Operation & Maintenance

- Clarifies what is considered system maintenance. 002 (Maintenance)
- Recirculating sand filter or equivalent technology influent and effluent sampling frequency is specified along with operator visit and reporting frequency is specified. 202(4)
- Septic tanks which have a working depth of only 3' are allowed in some instances but require annual pumping with results provided to the local approving authority. 223(2)
- Maintenance of pressure distribution systems needs to occur annually for flows less than 2,000 gpd and quarterly for larger flows with reports filed with local approving authority. [note this conflicts with 502(7) which requires quarterly reporting] 254(2)
- Effluent filters require annual maintenance. 227(7)
- Tight tanks still require an operation and monitoring plan but the frequency of visits is no longer specified as quarterly. 260(2)
- Graywater systems at sites with increased nitrogen loading rates shall be inspected annually with results to local approving authority and DEP. 300(5)
- System pumping form must be submitted to local approving authority within 14 days from the pumping date. 351(1)

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## Permits, Variances & Enforcement

- Removed sections which were a transition from the 1978 Code to the 1995 Code.
- Clarifies what is the existing approved capacity of an on-site system. *002 (Approved Capacity)*
- More clearly authorizes local approving authority to act against installers for inappropriate activities. *019*
- Clarifies certain violations such as not complying with deed restriction, or building or using a system before it has been authorized or discharging sewage to the ground surface. *024*
- Requires local approving authorities to maintain copies of disposal system installer permits. *030(1)*
- Removed section regarding reports to be produced by DEP
- Requires DEP to review certain applications in nitrogen sensitive areas within 30 days. *202(5)*
- Clarifies that design flow for an existing system is determined as listed on the most recent construction permit. *204*
- Reduces the permitting time with the DEP to 30 days for holding tanks and allows holding tanks to be utilized at seasonal dwellings as an upgrade. *260(1) and 260(8)*
- Makes certain variances from the regulations for upgrades to be reviewed by the local approving authority as a Local Upgrade Approval such as a sieve analysis when the soil is too wet to perform a percolation test, when certain components need to be deeper than the 3' maximum, or when a shallow (ledge) tank may be necessary. *405(1)*
- Clarifies that components must remain within the property even when seeking a Local Upgrade Approval. *405(1)*
- Requires an owner to file for any necessary variances following an emergency repair within 14 days of the action. *411(2)*
- Provides for variances to be approved if not acted on by the DEP within 30 days and clarifies the method for appealing certain variances. *412(2) and 421*
- Amended wording for sample shared system agreement provided. *Appendix 1*