

Town of Reading Board of Health Regulations

Section 8 Wells

8.1 Definitions

- 8.1.1 **Abandoned Well:** Any well that has not been used for water supply for a period of three years or more is considered abandoned.
- 8.1.2 **Registered Well Driller:** any person registered with the Department of Environmental Management/Division of Water Resources to dig or drill wells in the Commonwealth of Massachusetts.
- 8.1.3 **Well:** Any dug, driven or drilled hole, with a depth greater than its largest surface diameter developed to supply water, either for portable or nonportable use. This definition shall not include monitoring wells.

8.2 General Requirements

- 8.2.1 No person or firm shall install, maintain, or repair any well water system unless they are a Registered Well Driller as required by MGL c 21, section 16.
- 8.2.2 Before digging or drilling any well, the owner of the property shall register the activity with the Board of Health on a form supplied by the Board. The registration fee shall be fifty dollars (\$50.00). If the well location is within the aquifer district the owner of the proposed well will come before the Board of Health prior to commencing the installation of the well for permission from the Board of Health.
- 8.2.3 Within thirty days after completion of the construction of any well, the well driller shall submit to the board a Water Well Completion Report.
 - 8.2.3.1 The Board of Health shall receive from the well owner the initial well water test for coliform, nitrate, turbidity, volatile organic compounds, listed in the Massachusetts Drinking Water Standards sodium, alkalinity, calcium, chloride, color, copper hardness, iron, magnesium, manganese, nitrogen, odor, pH, potassium, sediment, sulfate and total dissolved solids. Samples taken from wells completed in crystalline bedrock should also be tested for radon, arsenic and selenium. In areas where current or historical land use includes agriculture, the sample shall be analyzed for pesticides, herbicide and arsenic. The Board of Health recommends that wells be retested at least every three years.

8.3 Decommissioning Requirements

Abandoned wells, test holes and borings shall be decommissioned so as to prevent the well, including the annular space outside the casing , from being a channel allowing the vertical movement of water.

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The owner of the private well shall decommission the well if the well meets any of the following criteria:

- 1) construction of the well is terminated prior to completion of the well
- 2) the well owner notifies the Board of Health that the use of the well is to be permanently discontinued
- 3) the well has, after extended use, been out of service for at least three years
- 4) the well is a potential hazard to public health or safety and the situation cannot be corrected
- 5) the well is in such a state of disrepair that its continued use is impractical
- 6) the well has the potential for transmitting contaminants from land surface into a aquifer or from one aquifer to another and the situation cannot be corrected

The property owner shall be responsible for ensuring that all abandoned wells and test holes or borings associated with private well installation are properly plugged. Only registered well drillers may plug abandoned wells, test holes and borings.

In the case of new well construction, all test holes and boring shall be plugged before the well driller completes work at the site.

Abandoned wells or borings shall be completely filled with grout which cured with a final permeability of less than 1×10^{-7} cm/sec. Wells shall be plugged with neat cement grout, sand cement grout, concrete or bentonite grout.

Regardless of the type used, the grout:

- 1) shall be sufficiently fluid so that it can be applied through a tremie pipe from the bottom of the well upward
- 2) shall remain as a homogeneous fluid when applied to the subsurface rather than disaggregating by gravity into a two-phase substance
- 3) shall be resistant to chemical or physical deterioration
- 4) shall not leach chemicals, either organic or inorganic, that will adversely affect the quality of the groundwater where it is applied

The plugging materials shall be introduced at the bottom of the well or boring and placed progressively upward to a level approximately four feet (4) below the

ground surface. Sealing materials shall never be poured from the land surface into the well, bore hole or annular space being sealed.

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The contractor shall emplace the surface seal no sooner than 24 hours after the well or boring has been plugged. Before the surface is placed casing remaining in the hole shall be cut off. The remaining four feet at the top of the well or boring shall be cut off. The remaining four feet at the top of the well or boring shall then be filled with concrete. The top of the seal shall comprise a concrete slab above the top of the plugged well or boring. The concrete slab shall be at least six (6) inches thick and shall be at least two (2) feet greater in diameter than the well casing and borehole wall.

8.4 Enforcement

Violations of these regulations are subject to a fine of fifty dollars (\$50.00) per offense. Each day that the offense continues shall constitute a separate offense.

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