

§ 305-2.17. Water quality specifications.

- A. Sanitary protection. Sanitary protection shall be incorporated into the construction of the well. All newly completed wells shall be disinfected and/or decontaminated in accordance with instructions from MassDEP's current Private Well Guidelines or suitably effective methods that are less toxic or less persistent. Disinfection and/or decontamination shall be carried out only by certified well drillers or other qualified professionals. A report of the disinfection procedures used shall be provided using the Board of Health's well disinfection and decontamination record form.
- B. Sampling/quality. A minimum of two water samples shall be collected by a qualified professional and submitted to a state-approved laboratory for analysis, consistent with the requirements of the Board of Health. One sample shall be taken when the well installation is completed and one shall be taken from a tap in the dwelling before occupancy. All results shall be submitted to the Board for approval. Acceptance of water quality shall also be based on its conformance to the normal characteristics of groundwater in the area, as well as established state and federal drinking water standards.
- C. Laboratory tests.
 - (1) A chemical, physical and bacteriological analysis of water, conducted by a Massachusetts certified laboratory using EPA-approved methods for drinking water analyses, shall be required for private and semipublic water supplies. An initial noncompliant analysis result may be superseded by two subsequent and consecutive compliant results. Water that does not meet the accepted standards of agencies of the state or federal government or of the Board of Health for potable water supplies shall be grounds for the rejection of the well.
 - (2) A bacteriological test to indicate a 0 per 100 ml coliform density shall be required. A total bacteria count shall also be determined at 35° C.
 - (3) Chemical and physical analysis, including testing for volatile organic compounds (using EPA 524.2 and updates) and PFAs (using USEPA Method 533 or 537.1 and updates), shall be required. Analysis shall be performed at least for pH, color, odor, iron, turbidity, manganese, ammonia nitrogen, nitrite nitrogen, nitrate nitrogen, alkalinity, total hardness, sodium, chlorides, lead, arsenic, volatile organic compounds (VOCs) and per- and polyfluoroalkyl substances (PFAs).
 - (4) Concentrations shall not exceed the following:

Color	15 units
Turbidity	5 std. turbidity units
Manganese	0.05 mg/l
Nitrate nitrogen	10 mg/l
Chloride	250 mg/l
Iron	0.3 mg/l

Sodium	* 20 mg/l
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Sodium content exceeding this level shall be made known to the occupant(s) and/or owner(s) in writing and copy of such notification, signed by the occupant(s) and owner(s), submitted to the Board of Health.

- (5) Other parameters shall be evaluated on a case-by-case basis by the Board of Health to establish the water's suitability as a private or semipublic water supply.
- (6) Water quality of semipublic water supplies shall comply with all requirements of Article II. Additional requirements may be specified by the Board of Health, as appropriate to the size and other characteristics of each semipublic water supply. Such requirements may include, but not be limited to, routine, periodic sampling and laboratory testing with a frequency of no longer than every five years, with dissemination of results to all service connections and the Board, and establishment of a formal financial and operational mechanism by the water supply owner(s) to enable ongoing sampling and laboratory analyses.
- (7) If concentration(s) of volatile organic compounds or PFAs is confirmed above levels presented in Subsection C(4) above, or the sodium concentration is greater than 28 mg/l, a document shall be attached to the deed and recorded in the South Middlesex Registry of Deeds which identifies the chemicals, their concentrations, and their potential health effects. A whole-house treatment system for the removal of volatile organic compounds or PFAs shall be installed if their concentrations exceed the standards defined in Subsection C(4).
- (8) If disinfection and/or decontamination of the well is required following installation and development, additional parameters shall be evaluated to identify whether the chemicals used in those procedures, or their by-products, are present.

D. Water conditioning. Permanent disinfection of a polluted supply shall be prohibited. If the natural water quality does not meet the physical and chemical criteria as listed in Subsection C, water conditioning shall be required. Water softener or other treatment backwash shall not be discharged into the septic system. Treatment units shall be installed with the capability of bypassing such units during a repair event or other special action, or if the raw water no longer requires treatment.

E. Prohibitions.

- (1) Surface water supplies for private or semipublic water supplies shall be prohibited.
- (2) Cisterns shall be prohibited.
- (3) Cross connections for whatever purpose shall not be allowed without a written permit from the Massachusetts Department of Public Health and approval by the Sherborn Board of Health.

F. Other use prohibitions. Wells used for drinking water and domestic water supply shall not be used to provide water for groundwater heat pump systems, for water-cooling or air-conditioning systems or irrigation. Any well used for such systems shall be approved by the Board of Health only after the applicant has submitted evidence to the satisfaction of the Board of Health that such use will not disrupt any quantity or quality of water from any nearby well, to satisfy the manufacturer's recommendations for proper equipment operation.