



AYER BOARD OF HEALTH
Private Well Regulations

Section 1. Purpose and Authority

The regulations are intended to promote the public health and general welfare by ensuring that private wells are constructed in a manner which will protect the quality of the groundwater derived from private wells. These regulations are adopted by the authority of M.G.L. Chapter 111, Section 31.

Section 1.1. Definitions

As used in these regulations, the following terms shall be defined and interpreted as follows:

Abandoned Water Well: A private well that has not been used for a water supply for a period of one (1) year or more and which the owner does not intend to use again.

Agent: The Nashoba Associated Boards of Health (hereinafter referred to as Nashoba) serving as the agent for the Ayer Board of Health, as provided by M.G.L. Chapter 111, Section 27A.

Aquifer: A water bearing geologic formation that contains water in sufficient quantities to potentially supply a well for drinking water or other purposes.

Person: An individual, corporation, company, association, trust, or partnership.

Portable Water: Water that is satisfactory for drinking and for culinary and domestic purposes.

Private Well: A water supply well which will not serve either a number of service connections or a number of individuals sufficient to qualify as a public water system as defined in 310 CMR 22.02.

Pumps and Pumping Equipment: Any equipment or materials used or intended for use in withdrawing or obtaining groundwater. Including, without limitation, seals and tanks, together with fittings and controls.

Regulating Agency: The Ayer Board of Health through its agent, the Nashoba Associated Boards of Health.

Well: An excavation or opening into the ground made by digging, boring, drilling, driving, or other methods, for the purpose of providing a potable drinking water supply.

Well Driller and/or Digger: Any person who is licensed by the Water Resources Commission (as defined by Chapter 620 of the Acts of 1956, as amended) to construct wells.

Well Seal: An approved arrangement or device used to cap a well or to establish and maintain a junction between the casing or curbing of a well and the piping or equipment installed therein, the purpose or function of which is to prevent pollutants from entering the well at the upper terminal.

Section 2. Requirements for Private Wells

- (1) No private well shall be deemed a source of potable water unless it is constructed in accordance with these regulations. No well shall be constructed or destroyed except in accordance with these regulations.
- (2) For each private well constructed after the effective dates of these regulations, there shall be:
 - a. a well construction permit application;
 - b. a well construction permit;
 - c. a water quality analysis;
 - d. a certificate of compliance with the terms of the permit;
 - e. a well driller's or digger's report.
- (3) For each private well destroyed after the effective date of these regulations, there shall be:
 - a. a well destruction permit application;
 - b. a statement of well abandonment from the owner;
 - c. a well destruction permit;
 - d. a well driller's or digger's, or contractor's report of destruction.
- (4) The Ayer Board of Health or its agent shall investigate violations of these regulations or of any permit issued and may take such actions as it may deem necessary for the protection of the public health and to restrain violations of these regulations.
- (5) Whosoever violates these regulations shall be punished by a fine of not more than \$500.00 dollars to, and for the use of, the Town in which the well is located.

Section 3. Well Construction or Destruction Permits

- (1) No person shall engage in the business of constructing or destroying private wells within the Town under these regulations unless registered as a well driller/digger with the Water Resources Commission, pursuant to 313 CMR 3.00.
- (2) An application for a well construction or destruction permit shall be submitted by the property owner, the well driller/digger or his agent to Nashoba on a form furnished by Nashoba.
- (3) A well construction or destruction permit shall be obtained from Nashoba prior to the construction or destruction of any private well. Nashoba shall charge a fee for each well construction or destruction permit and said fee shall be paid to the Nashoba Associated Boards of Health prior to the permits issue.

Section 4. Well Construction Permit Requirements

The following information shall be submitted by the property owner or the well driller/digger or their agent with the well construction application, prior to the issuance of a permit:

- a. general location of the proposed well to include the location of at least one road intersection for reference;
- b. a sketch of the expected construction of the well to include an approximation of the expected well depth;
- c. a description of any possible source(s) of contamination within 400 feet of the proposed well location (see Section. 4.1(1));
- d. The well driller's/digger's name and certification number as it appears on the Water Resources Commission certificate;
- e. Description of the prior/current land use in the vicinity of the proposed well location (i.e., agricultural, industrial, etc.).

For emergency repair, alteration, or replacement of an existing well, the Ayer Board of Health or Nashoba may waive the requirements of these regulations for dwellings which were in existence prior to the effective date of this regulation.

Section 4.1. Well Location Requirements

- (1) In establishing the location of a well, the well owner and/or the driller/digger shall identify any and all sources of potential contamination (agricultural fields, animal feed lots, beauty salon, dry cleaner, funeral home, furniture stripper/refinisher, gasoline/service station, fuel depot, automotive junk yard, railroad line or yard, etc.) which exist within 400 feet of the proposed well site.

The following minimum lateral distances from contamination shall apply with the granting of a variance under special conditions:

Source of Contamination	Minimum Distance (feet)
Leaching facility (310 CMR 15.00)	100
Leaching facility (in soils with percolation rates 2 minutes per inch or less)	150
Cesspool	100
Septic tank	50
Sewer line	50
Property line	50
Public or private way, common drive, easement	50
Active or closed landfill	400
Hazardous waste spill site	400
Any type of surface water	100

- (2) Where, in the opinion of the Ayer Board of Health or Nashoba, adverse conditions exist, the above minimum distances may be increased or special means of protection may be required.

These special requirements shall be added to the well construction permit by Nashoba.

- (3) The well shall be up gradient of sources of contamination whenever possible. The top of the well shall be higher than any surface of contamination and above any conditions of flooding by drainage or runoff from the surrounding land, unless otherwise adequately protected.

Section 4.2. Well Construction Standards

- (1) Wells shall be constructed in compliance with the recommendations of the latest edition of the Manual of Individual Water Supply, U.S. Environmental Protection Agency (U.S. EPA), Water Supply Division (exception: springs shall not be used for the purpose of a potable water supply).
- (2) The annular space between the protective well casing and the wall of the drilled hole or surface casing shall be effectively sealed. The seal is to protect against contamination by surface and/or shallow, subsurface waters.
- (3) The well casing shall be capped or covered with a sanitary well seal. Casings shall extend a minimum of 24 inches above the highest known flood levels or 18 inches above the ground surface in areas which are not subject to flooding. In addition, all non-vent openings shall be sealed to exclude the intrusion of contaminants. Vent openings shall be of an approved type, complete with screening.
- (4) Any well that is finished in bedrock or penetrates any confining layers (impervious formations) and therefore a potentially different aquifer(s) shall require the sealing off of each aquifer from the other(s). A minimum of ten feet of an appropriate sealing material shall be used to seal one aquifer or formation from another.
- (5) When well screens are used, the screen length and opening size should be selected to ensure that the water supply will be free from silts and sands and other suspended solids.
- (6) Well pumps and water storage equipment shall be selected to ensure that the water supply is to be adequate (a minimum of five gallons per minute (GPM) is recommended) over a sustained period of pumping. NOTE: The proper selection of the pump is important to protect against unnecessary wear on the equipment and to maintain a safe and adequate supply of water.
- (7) Pump suction lines (if used) shall not be closer than 100 feet from underground sewage leaching facilities or 50 feet from a septic system (310 CMR 15.03).
- (8) Well pits to house the pumping equipment or to permit accessibility to the top of a well shall not be permitted.

Section 4.3. Disinfection and Other Sanitary Requirements

All private wells shall be disinfected following construction, rehabilitation, and well or pump repair, before the well is placed into service. The well shall be pumped to waste (not to the

septic system) until the water is as clear as possible. Thereafter the well and the pumping equipment (and plumbing, if installed) shall be disinfected with a solution containing at least 50 parts per million (ppm) of chlorine. The well shall remain in contact with the chlorine solution for a minimum of 24 hours before the well is pumped to waste (not the septic system) and the water found to be free of chlorine. (Information and instructions for the disinfection procedure is available from Nashoba.)

Section 4.4. Water Sampling Procedure

- (1) Water sample(s) shall be collected by Nashoba. All water sample(s) shall be collected in an appropriate manner as to maintain the integrity of the sample collected. Collection of the sample(s) shall occur following the well development and the disinfection process for the well (see Section 4.3). The water sample may be taken to a laboratory of Nashoba's choice unless the owner selects a specific laboratory, at which time the sample container may be sealed with the custody tag and delivered to the owner-selected testing laboratory by him/herself. The laboratory shall be required to notify Nashoba should the sample be received with a broken custody seal.
- (2) A representative water sample for laboratory analysis shall be collected at the pump discharge or from a tap in the pump discharge line. A representative sample shall constitute a sample collected after the removal of at least three standing volumes of water from the well or a minimum of 10-15 minutes of pumping from the well.
- (3) The sample(s) shall be analyzed for the following parameters at a minimum: coliform bacteria, arsenic, lead, sodium, iron, manganese, copper, magnesium, color, sulfate, turbidity, alkalinity, chlorine, chloride, hardness, ammonia, nitrite, nitrate, pH, conductivity, odor, and potassium. All analyses shall be performed in accordance with U.S. EPA methods or other approved methods for drinking water analysis.
- (4) Analytical tests such as volatile organics (VOCs), pesticides, PCBs, and inorganics (metals) other than those specified in Section 4.4(3), can be added or deleted, as public knowledge increases or at the request of the Ayer Board of Health or Nashoba, when conditions may indicate the need (i.e., prior land use) for such testing. Samples which are to be analyzed for volatile organic compounds shall not contain air bubbles of any size.

Section 4.5 Water Quality

- (1) All analytical results shall be reviewed by Nashoba and an assessment of the suitability of that well for drinking water will be made. Nashoba will adhere to the current and applicable drinking water standards as detailed by the U.S. EPA and the State of Massachusetts Department of Environmental Quality Engineering (DEQE). Approval of the results, by Nashoba, must be obtained in writing before the well shall be placed into service as a drinking water supply.
- (2) The water sample(s) shall be analyzed by a laboratory certified to perform drinking water analysis by the DEQE for each parameter analyzed. A copy of the results shall be sent to

both the Ayer Board of Health and Nashoba. All fees for the water testing are the responsibility of the applicant, and all fees shall be paid in full prior to the approval of the well permit.

- (3) As stated in Section 4.4, Nashoba or the Ayer Board of Health may require that additional chemical analysis be performed on the well water. Any such additional requirement shall specify which chemical constituents or chemical fractions (pesticide/PCB, extractables, etc.) shall be tested for.
- (4) No result shall exceed the current and applicable drinking water standards for a public water supply, as detailed by the U.S. EPA and/or DEQE (40 CFR 141 and 310 CMR 32). Nashoba may also use professional judgement when assessing the results of the water well prior to approval of that well. When the results indicate a potential health hazard (i.e., possible gasoline contamination), Nashoba may at its discretion disapprove the well for use as a water supply.

Section 4.6. Well Completion Requirements

Within 30 days after the completion of the construction of any well, the well driller/digger shall submit to Nashoba a report containing the following information:

- a. the name of the owner of the well;
- b. the address of the property served and/or the lot number as assigned by the Assessor's office;
- c. the depth, size, and method of construction of the well;
- d. the location of the well which shall show the distance from two permanent landmarks;
- e. the static water level;
- f. the yield of the well after eight hours of pumping;
- g. the recovery after draw down and yield tests (for at least a 24-hour period);
- h. the well driller's/digger's log information.

The well driller's/digger's report shall be signed by an authorized representative and shall constitute a statement of compliance with all requirements of these regulations. This will satisfy the requirement of the certificate of compliance.

Section 5. Well Destruction

A well that is abandoned shall be destroyed to protect the groundwater supply and to eliminate potential physical hazards. Wells shall be sealed with non-hazardous, impervious materials which shall be permanently in place. All exposed casing materials, pumping equipment, and distribution lines shall be removed. The excavation shall be returned the existing grade of the surrounding land. A record of abandonment shall be kept in accordance with Section 2.01(5).

Section 5.1. Well Destruction Requirements

The following information shall be submitted with each well destruction application, prior to the issuance of a permit:

- a. the specific location of the well to be destroyed;
- b. the design and construction of the well to be destroyed;
- c. a written statement from the owner that the well is abandoned.

Within 30 days after the destruction of any well, the well driller/digger or contractor shall submit to Nashoba a report containing the following:

- a. the name of the owner of the well;
- b. the address of the property served;
- c. method of sealing, including materials used;
- d. person or persons sealing the well and date of the sealing of the well.

The well driller's/digger's report shall be signed by an authorized representative and shall constitute a statement of compliance with all requirements of these regulations. This will satisfy the requirement of the certificate of compliance.

Section 6. Variances

- (1) Variances may be granted only as follows: The Ayer Board of Health may vary the application of these regulations with respect to any particular case when, in its opinion, the enforcement thereof would do manifest injustice, and the applicant has proven that the same degree of public health and environmental protection required under these regulations can be achieved without strict application of a particular provision(s).
- (2) Variance requests shall be in writing to the Ayer Board of Health and include all the information/reasons and proposed measures necessary to assure the protection of the public health and environment. The Ayer Board of Health shall grant, modify, or deny a variance in writing and state the reasons for any denial.

Section 7. Substantive Procedures

Substantive Procedures shall be performed as specified in 105 CMR 400.1.

The above Well Regulation approved and adopted by the Ayer Board of Health on the 10 day of January, 2001.

(signed)

Margaret Kidder
Chairman

(signed)

C. Jane Witherow
Clerk

(signed)

Laurie Rosas
Member

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These regulations were passed on 1-10-01

These regulations went into effect on 1-10-01

Reviewed with no changes (reformatted only) on 7-9-12

Mary Spinner, Chair, Ayer Board of Health

Margaret M. Kidder, Clerk, Ayer Board of Health

Marilyn McMillan, Member, Ayer Board of Health