

HEALTH REGULATION  
FOR  
PRIVATE WELL PERMITTING

Under chapter 111, Section 31 of the Massachusetts General Laws, the Foxborough Board of Health adopts the following Regulations to protect the health of residents of the Town of Foxborough who are served by private on-lot wells.

**Section 1. Well Permit Applications.**

- 1.1 Any resident who wishes to construct a private on-lot well as a source of potable drinking water or for irrigation purposed shall apply for a permit from the Foxborough Board of Health.
- 1.2 Applicants shall provide the Board of Health with a locus map (U.S. Geological Survey quadrangle is recommended) and a copy of the State "Water Well Completion Report" with well location and septic systems (including adjacent lots) shown in diagram.
- 1.3 A fee of \$100 per application shall be charged by the Board of Health to cover permitting costs.

**Section 2. Wells**

- 2.1 Wells shall be located at least 15 feet from any public or private way or street, 15 feet from any building, 15 feet from lot lines, 50 feet from any septic tank, and 100 feet from any leaching facility. Greater distances from leaching facilities may be required by the Board of Health if geologic or groundwater flow conditions so warrant. Conversely, septic systems shall be located at least 100 feet from any existing wells.
- 2.2 A plot plan shall be submitted with the application for a well permit to the Board of Health indicating the proposed location of the well, all buildings, boundary lines, septic systems (within 200 feet, including adjacent lots).
- 2.3 Wells must be properly curbed and covered to prevent entrance or contamination and to divert surface drainage away from the well.
- 2.4 A pitless adapter shall be provided such that the permanent watertight casing of the well shall terminate a minimum of 12 inches above finished grade and/or the elevation of 100-year flood.
- 2.5 Abandoned wells must be filled, capped, and secured against tampering and contamination.

**Section 3. Well Drillers**

- 3.1 All well drillers shall have a Massachusetts State license issued by the Water Resources Commission.

#### Regulation 4. Water Quality and Quantity

4.1 There shall be a minimum yield of 200 gallons per bedroom per day at 20 lbs. P.S.I. at the highest fixture serviced. A bedroom shall include undeveloped area that could be made into a bedroom. System capacity for semi-public supplies must be adequate to meet the projected needs.

4.2 Pressure tanks for individual home installations shall have a minimum total capacity of 42 gallons.

4.3 Quantity tests shall be performed by competent pump or well drilling contractors and a well shall produce a supply for each dwelling unit served by an on-site well as follows:

<u>Well Depth</u>	<u>GPM - 4 hrs.</u>
0 to 150 feet	5-6
150 to 200 feet	4
200 to 300 feet	2-3
300 and over	1-2

4.4 Auxiliary power must be available to maintain a water supply for multiple dwellings.

4.5 The wall of a dug well shall extend at least 4 inches above the floor or the original ground surface.

4.6 Sanitary protection must be incorporated into the construction of the well and final finishing at grade shall include a cement platform large enough to extend at least 2 feet in all directions from the well casing itself.

4.7 All newly completed wells shall be disinfected in accordance with instructions from U.S. Environmental Protection Agency Manual of Individual Water Supply Systems.

4.8 Before approval, well log and pump test data shall be submitted to the Board of Health in the form attached to these regulations. It shall include a log of the well, showing depth and type of over-burden, depth of casing installed below ground surface, diameter of casing and diameter of the hole in the rock, static water level, and the pumping rate which can be sustained for four (4) hours. The well, after pump testing shall recover to within eighty-five (85) percent of the original static water level within a twenty-four (24) hour period. The results of all testing shall be submitted to the Board of Health for approval and the well contractor shall be responsible for all data submitted.

4.9 Wells shall be cleaned and sampled by certified lab personnel. Sampling methods selected should minimize agitation of the sample.

4.10 PH and specific conductance shall be measured in the field by the certified lab personnel.

4.11 The water sample shall be iced, picked up (within 24 hours) by a State-certified water quality laboratory and shall be analyzed for total coliform bacteria, turbidity, iron, manganese, nitrate-nitrogen, chloride, and copper.

- 4.12 A bacteriological test to indicate a 0/100 ML coliform density shall be required. A total bacteria count shall also be determined at 35°C.
- 4.13 Water quality shall meet the following limits to conform to current and Federal and Mass. Drinking Water Standards.

pH	5.5-7.5
Specific Conductance	500 Mmhos/cm
Turbidity	5 SU
Iron	0.3 ppm*
Manganese	0.05 ppm*
Nitrate-Nitrogen	10 ppm
Chloride	250 ppm
Cooper	1.0 ppm

- \* Excessive iron and manganese may be treated to achieve the required water quality standards.
- \* Sodium to be reported to the homeowner if greater than 20 mg/l. Other parameters will be evaluated on a case by case basis by the Board of Health to establish the water's suitability as a domestic water supply.
- \* Screening for Volatile Organic Compounds must also be tested in accordance with EPA 524 Method and upon request EPA 504 Method.
- \* Screening for Heavy Metal Toxicity must also be done in accordance with EPA Methods.

- 4.14 It is recommended that owners have their wells tested at least annually.

#### **Regulation 5. Water Conditioning**

- 5.0 Permanent disinfection of a polluted supply maybe prohibited (dependent upon the severity as determined by the Board of Health). If the natural water quality does not meet the physical and chemical criteria, water conditioning shall be required. Water softener or other treatment backwash shall not be discharged into the septic system.

#### **Regulation 6. Pipes and Equipment**

- 6.0 All services and connections shall be nontoxic material and meet the specifications approved by the New England Water Works Association.
- 6.1 The installation of pipes shall be such that they are protected from crushing, freezing and/or attack by rodents.
- 6.2 Dissimilar metals should be discouraged in the water system. The use of non-conductive plastic inserts between pipes and fittings or the installation of sacrificial anodes is helpful in minimizing electric corrosion problems.
- 6.3 Electrical service grounds shall not be attached to the water piping. All electrical service and controls of the well must be permitted, inspected and approved according to Town and State regulations.

## **Regulation 7. Prohibitions**

- 7.0 Surface water supplies for private or semi-public water supplies shall be prohibited.
- 7.1 Cisterns shall be prohibited.
- 7.2 Cross connections shall be prohibited. No cross connection between a private source of water supply shall be allowed.
- 7.3 Other cross connections for whatever purpose shall not be allowed without a written permit from the Mass. Dept. of Public Health.
- 7.4 All homes already on private wells must report their location to the Board of Health within 6 months. No permit or fee is required.
- 7.5 No lot may be connected to both Town and private potable water systems.

## **Regulation 8. Enforcement**

### 8.0 Variances

- 8.0.1 The Board of Health may vary the application of any provision of these regulations with respect to any particular case, when in its opinion, the enforcement thereof would do manifest injustice, provided that the decision of the Board of Health shall be in writing.
- 8.1 Variance, Grant of Special Permission, Expiration, Modifications, Suspension of Permit.
  - 8.1.1 Any variance or other modification authorized to be made by these regulations may be subject to such qualification, revocation, suspension or expiration as the Board of Health expresses its grant. A variance or modification authorized to be made by these regulations may otherwise be revoked, modified, or suspended, in whole or in part, only after the holder thereof has been notified in writing and has been given an opportunity to be heard.

### 8.2 General Enforcement

- 8.2.1 The provisions of Article 1 of the State Environmental Code shall govern the enforcement of these regulations.

### 8.3 Orders: Service and Content

- 8.3.1 If an examination as provided for in regulation 3.2.1 or 3.2.2 reveals failure to comply with the provisions of these regulations, the Board of Health may order the person responsible to comply with the violated provision.
- 8.4 The inspection and these regulations cannot be construed as a guarantee by the Town of Foxborough, or its agents, that the water system will function satisfactorily.
- 8.5 The Board of Health may require a restriction to be recorded in the Registry of Deeds in cases which, in the opinion of the Board of Health, the water analysis show marginal compliance with the criteria of these regulations.

**Regulation 9. Adoption and Date of Effect**

These rules and regulation were adopted by the Board of Health, Town of Foxborough, Massachusetts, and are to be in full force and effect on and after July 1, 1990 and shall, before said date, be publisher in this Town and a copy thereof shall be deposited in the office of the Town Clerk.

FOXBOROUGH BOARD OF HEALTH

THE FOLLOWING INFORMATION MUST BE SUPPLIED TO THE BOARD OF HEALTH FOR ITS REVIEW BEFORE ANY APPROVAL CAN BE GIVEN FOR USE OF THE WELL AND/OR OCCUPANCY PERMIT:

WELL AND PUMP TEST DATA: Must be signed by well contractor and company performing pump test, also, if different:

LOCATION: \_\_\_\_\_

DATE OF PUMP TEST: \_\_\_\_\_

DEPTH OF WELL: \_\_\_\_\_

DEPTH OF LEDGE BELOW SURFACE GRADE: \_\_\_\_\_

DEPTH OF CASING: \_\_\_\_\_

DIAMETER OF WELL: \_\_\_\_\_

DEPTH OF STATIC WATER LEVEL BELOW GRADE BEFORE PUMP TEST: \_\_\_\_\_

STATIC WATER LEVEL DEPTH AFTER 24 HOURS: \_\_\_\_\_

WELL YIELD IN GPM DURING PUMP TEST\*: \_\_\_\_\_

\*Started pumping at \_\_\_\_\_ at rate of \_\_\_\_\_ GPM  
Stopped pumping at \_\_\_\_\_ at rate of \_\_\_\_\_ GPM

DEPTH OF PUMP DURING PUMP TEST: \_\_\_\_\_

SIZE OF PUMP FOR PUMP TEST (H.P.): \_\_\_\_\_

DEPTH OF PUMP TO BE INSTALLED FOR HOUSE: \_\_\_\_\_

SIZE OF PUMP TO BE INSTALLED FOR HOUSE: \_\_\_\_\_

NAME OF WELL DRILLING COMPANY: \_\_\_\_\_

(Must be registered with Mass. Water Resources Commission)

NAME OF COMPANY PERFORMING PUMP TEST: \_\_\_\_\_

CASING SEALED WITH: \_\_\_\_\_

THE FOLLOWING BACTERIOLOGICAL AND CHEMICAL ANALYSIS MUST BE PERFORMED ON A SAMPLE. **Sample must be taken from a tap in the building.**

- |                               |                |
|-------------------------------|----------------|
| Total Bacteria Count at 35°C. | Manganese      |
| Total Coliform per 100 ml     | pH             |
| Ammonia Nitrogen              | Color          |
| Nitrite Nitrogen              | Odor           |
| Nitrate Nitrogen              | Turbidity      |
| Chloride                      | Alkalinity     |
| Sodium                        | Total Hardness |
| Iron, Total                   | Copper         |

Other parameters may be required on a case by case basis if deemed to be necessary by the Board of Health. (see also 4.13)