



ADOPTED: 12/16/82

TOWN OF WAYLAND
BOARD OF HEALTH

WAYLAND

MASSACHUSETTS

MINIMUM SANITATION STANDARDS FOR PRIVATE OR

SEMI-PUBLIC WATER SUPPLY

The Board of Health of the Town of Wayland, acting under the authority of Chapter 111, Sec. 31 of the General Laws and Amendments and Additions thereto, and by any other power thereto enabling, and acting thereunder, have, in the interest of, and for the preservation of the public health, duly made and adopted the following rules and regulations:

Section I. DEFINITIONS

A. Well - Includes any pit, pipe excavation, spring, casing, drill hole or other source of water to be used for any purpose of supplying potable water in the Town of Wayland and shall include dug wells, driven or tubular wells, drilled wells (artesian or otherwise) and springs, gravel packed, gravel walled wells, gravel developed and wash borings and as further described in U.S. Environmental Protection Agency Manual of Individual Water Supply Systems.

B. Water Systems - Includes pipes, valves, fittings, tanks, pumps, motors, switches, controls and appurtenances installed or used for the purpose of storage, distribution, filtration, treatment or purification of water for any use whether or not inside a building.

C. Private Water Supply - Any water system serving or intended to serve water for human consumption or for domestic uses or purposes on one lot. The system shall include all of the sources, treatment works, and distribution lines to the point where distribution takes place within the building.

D. Semi-public Water Supply - Any water system serving or intended to serve water for human consumption or for domestic uses or purposes including a multiple dwelling, or to restaurants, dairies, schools, institutions, motels, mobile home parks, bottling plants, campgrounds, recreational camps for children, state forests, parks, beaches.

Section II. PERMITS FOR PRIVATE OR SEMI-PUBLIC WATER SUPPLY

A. No private or semi-public water supply shall be installed, altered or repaired until a permit has been obtained from the Board of Health or its Agent. The fee for this permit shall be set by the Board from time to time. A permit so granted shall expire two years from the date of issue unless construction is begun.

B. 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 ft.).

Section III. GENERAL REQUIREMENTS

A. No occupancy of the facilities which the well is to serve may be permitted until

the well is installed, completed, and has been demonstrated to supply water of the quality and quantity specified herein.

B. The well contractor shall observe sanitary measures and precautions in the performance of his work in order to prevent pollution or contamination of the well.

C. Well drillers must be registered with the Massachusetts Water Resources Commission.

D. Wells shall be located at least 15 ft. from any public or private way or street and 10 ft. from lot lines, and 50 ft. from any part of the septic system and 100 ft. from any leaching area or any other such greater distance as may be required by the Board of Health. The well must also be a minimum of 5 ft. from any building or projection thereof.

E. The owners of a semi-public water supply shall possess and display an unrevoked permit from the Board of Health which signifies the status of sanitary protection, maintenance, operation and improvements recommended.

F. Pump houses or pump rooms shall be kept in sanitary condition at all times. Also the size of the room should be no larger than necessary to house the pumping and the electrical equipment involved in the water system. Lawnmowers, snowblowers, or other gas driven engines shall not be stored in the pump room. Insecticides, herbicides and/or fertilizers and the like shall not be stored in the pump room.

G. Pump house, pump or pipe pits and wells shall be designated and constructed so as to prevent flooding and otherwise to prevent the entrance of pollution or contaminants.

H. Pump houses, pump rooms and pitless adapters shall be installed in accordance with the "Individual Water System" USEPA manual.

I. No person shall install or enter into a contract for installing or making additional modification, or alterations to any "semi-public" water supply before submitting complete plans, specifications and descriptions to the Board of Health and receive from them written approval. Private and semi-public water supply systems shall be approved by the Board of Health before occupancy is permitted.

Section IV. WELL SPECIFICATIONS

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

B. Pressure tanks for individual home installations shall be diaphragm type and have a minimum capacity of 36 gallons.

C. 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 DRAWING DEPTH</u>	<u>GPM - 4 hrs. (Minimum)</u>
0 to 150 feet	5-6
150 to 200 feet	4
200 to 300 feet	3
300 and over	2

- D. Auxiliary power must be available to maintain a water supply for multiple dwelling
- E. 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.
- F. Well must be curbed and covered to prevent entrance or contamination and to divert surface drainage away from the well.

G. PIPES AND EQUIPMENT

- 1. All service pipes and connections shall be of nontoxic material and meet the specifications approved by the New England Water Works Association.
- 2. The installation of pipes shall be such that they are protected from crushing, freezing and/or attack by rodents.
- 3. 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.
- 4. Electrical service grounds shall not be attached to the water piping. All electrical service and controls of well must be permitted, inspected and approved according to Town and State regulations.

Section V. WATER QUALITY AND QUANTITY SPECIFICATIONS

- A. Sanitary protection shall be incorporated into the construction of the well and final finishing at grade shall include cement platform large enough to extend at least 2 ft. in all directions from the well casing itself.
- B. All newly completed wells shall be disinfected in accordance with instructions from U.S. Environmental Protection Agency Manual of Individual Water Supply Systems.
- C. 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.
- D. A chemical, physical, and bacteriological analysis of the water, conducted by a Mass. Certified Laboratory, shall be required. Water which does not meet the accepted standards of agencies of the State or Federal Government for potable water supplies shall be grounds for the rejection of the well. One sample shall be taken from a tap in the dwelling before occupancy. Acceptance of water quality shall also be based on its conformance to the normal characteristics of ground water in the area.
- E. 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.
- F. Chemical and physical analyses shall be required. Toxicity tests may also be required. Analyses shall be performed for at least pH, color, odor, iron, turbidity, manganese, ammonia, nitrogen, nitrite nitrogen, alkalinity, nitrate nitrogen, total

hardness, sodium, chlorides. Concentrations shall not exceed the following:

Color	15 units
Turbidity	5 SU
Manganese	0.05 mg/1
Nitrate Nitrogen	10 mg/1
Chloride	250 mg/1
Iron	0.30 mg/1

Sodium content shall be reported to the homeowner if greater than 20 mg/1. 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.

G. Where applicable, water quality of semi-public water supplies shall comply with effective regulations of the U.S. Environmental Protection Agency and the Commonwealth of Massachusetts.

H. WATER CONDITIONING

Permanent disinfection of a polluted supply is prohibited. If the natural water quality does not meet the physical and chemical criteria as listed in Section V. F., 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 by-passing such units if necessary or desired.

Section VI. PROHIBITIONS

- A. Surface water supplies for private or semi-public water supplies shall be prohibited.
- B. Cisterns shall be prohibited.
- C. Cross connections shall be prohibited.
- D. Other cross connections for whatever purpose shall not be allowed without a written permit from Mass. Dept. of Public Health.
- E. Wells used for drinking water and domestic water supply shall not be used to provide water for ground water heat pump systems, for water cooling or air conditioning systems or irrigation. Any wells used for such systems shall be approved by the Board of Health only after the applicant has submitted sufficient evidence to the satisfaction of the Board of Health that such use will not disrupt any quantity of water to satisfy the manufacturer's recommendations for proper equipment operation.

Section VII. VARIANCE

A. 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 manifest injustice, provided that the decision of the Board of Health shall not conflict with the spirit of these minimum standards. Any variance granted by the Board of Health shall be in writing.

B. 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.

Section VIII. ENFORCEMENT

A. The provisions of Title 1 of the State Environmental Code shall govern the enforcement of these regulations.

B. Orders: Service and Content

1. If an examination as provided for in Section V. C. and/or D. reveals failure to comply with the provisions of these regulations, the Board of Health may order the person or company responsible to comply with the violated provision.

2. The inspection and these regulations cannot be construed as a guarantee by the Town of Wayland, or its agents, that the water system will function satisfactorily.

3. 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 analyses show marginal compliance with the criteria of these regulations.

Section IX. ADOPTION AND DATE EFFECT

These rules and regulations were adopted by vote of the Board of Health, Town of Wayland, Massachusetts, and are to be in full force and effect on and after Jan 17, 1983, and shall, before said date, be published and a copy thereof shall be deposited in the office of the Town Clerk.

BOARD OF HEALTH
TOWN OF WAYLAND

Robert S. Wenstrup
Robert S. Wenstrup, Ph.D., Chairman

Joan A. Carroll
Joan A. Carroll

Eva M. Pereli
Eva M. Pereli, M.D.

