

TOWN OF NORFOLK MA

One Liberty Lane, Norfolk MA 02056
ph: 508-528-1408

Well Regulations

MINIMUM SANITATION STANDARD FOR PRIVATE OR SEMI-PUBLIC WATER SUPPLY

Regulation 1: TERMS

1. Well - The word "well" so used in these regulations shall include 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 Norfolk, and shall include dug wells, driven or tubular wells, drilled wells (artesian or other wise) and springs, gravel packed gravel walled wells, gravel developed and wash borings and as further described "The U.S. Environmental Protection Agency Manual of Individual Water Supply Systems".

2. Water Systems - The words "water systems" as used in these regulations shall include 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.

3. Private Water Supply - The term "private water supply" means 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.

4. Public Water Supply - The term "semi-public water supply" means any water system serving or intended to serve water for human consumption or for domestic uses or purposes including a multiple dwelling under a single ownership and located on the same lot, or to restaurants, dairies, schools, institutions, motels, mobile parks, bottling plants, campgrounds, recreational camps for children, state forests, parks and beaches.

Regulation 2: WELLS

2.1 No well shall be installed 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.

2.2 No issuance of a building permit for 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 quality and quantity satisfactory to the Board of Health as specified herein. No occupancy of the facilities which the well is to serve may be permitted until a second sample, taken from a tap within the building, is tested and is of a quality satisfactory to the Board of Health and as specified herein. The water sample taken, prior to issuance of the Board of Health Certificate of Compliance, shall be

collected by an authorized agent of the testing laboratory who certifies that the same has been correctly taken the site.

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

2.4 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).

2.4.1 No wells shall be closer than the distances stated to the components listed in the following table:

Component Distance from well

Leaching Areas

Perc Rate Less Than 5 min/in 150 feet

Perc Rate 5 to 10 min/in 125 feet

Perc Rate Greater than 10 min/in 100 feet

Other Wells 50 feet
Sideline of Public or Private Way or Street 40 feet
Building or Projection thereof 10 feet
Lot Lines 15 feet
Any other Part of Septic System 50 feet
Distance Min.hgt above
Leaching Areas From well water table
Perc Rate:

Less than 5 min/in 150 feet 4 ft.

125 feet 5 ft.

100 feet 6 ft.

5 to 10 min/in 125 feet 4 ft.

100 feet 5 ft.

greater than 10 min/in 100 feet 4 ft.

2.4.2 Well must be properly curbed and covered to prevent entrance or contamination and to divert surface drainage away from the well.

2.4.3 A pitless adapter shall be provided such that the permanent water-tight casing of the well shall terminate a minimum of 18" above finished grade and/or the elevation of a 100 year flood.

2.5 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.

2.5.1 Pressure tanks for individual home installations shall have a capacity of 30 gallons per bedroom served with the minimum size of 42 gallons.

2.5.2 Quantity tests shall be performed by a competent pump or well drilling contractor and a well shall produce a supply for each dwelling unit served by an on-site well as follows:
Well Depth Gallons per minute for four hours

0 to 150 feet 5-6

150 to 200 feet 4

200 to 300 feet 2-3

300 and over 1-2

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

2.5.4 The wall of a dug well shall extend at least four inches above the floor or the original ground service.

Regulation 3: Sanitation Production and Quality

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

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

3.3 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 overburden, 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 eightyfive(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.

3.4 A quantitative analysis is required for EPA 624 volatile organic compounds, or its equivalent as approved by the Board of Health. If in the opinion of the Board of Health its standard analysis, as described in these regulations shows no significant changes in the general water quality produced by the well between the first and second samples, the requirement for a second volatile organics analysis for the tap sample prior to the occupancy may be waived. The first sample shall be taken

directly from the well. The second sample shall be taken from a bathroom or kitchen tap in the building.

3.4.1 A bacteriological test to indicate a 0/100 ML coliform density shall be required. The total bacterial count at 35 degrees centigrade shall not exceed 100 parts per milliliter.

3.4.2 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, nitrogen, nitrite nitrogen, alkalinity, nitrate nitrogen, total hardness, sodium, chlorides, Arsenic and Lead. Concentrations shall not exceed the following:

Color: 5 units

Turbidity: 5 SU

Manganese: 0.05 mg/L

Nitrate Nitrogen: 10 mg/L

Chloride: 250 mg/L

Iron: 0.30 mg/L

Sodium: To be reported to the homeowner if greater than 20mg/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.

3.4.3 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.

3.4.4 Approval of water quality by the Board of Health shall be based upon its conformance to the above ground criteria as well as to the normal characteristics of ground water in the area.

3.5 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.

3.6 Pump houses or pump rooms shall be kept in a 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, snow blowers 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.

3.6.1 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 construction.

3.6.2 Pump house, pump rooms, and the pitless adapters shall be installed in accordance with the "Individual Water System".

3.7 No person shall install or enter into a contract for installing or making additions, modifications, 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.

Regulation 4: WATER CONDITIONING

4.0 Water treatment or conditioning units shall be installed with the capability of bypassing such units if necessary or desired.

Regulation 5: PIPES AND EQUIPMENT

5.0 All service pipes and connections shall be of non-toxic material and meet the specifications approved by the New England Water Works Association.

5.1 The installation of pipes shall be such that they are protected from crushing and/or attack by rodents and freezing.

5.2 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.

5.3 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.

Regulation 6: Prohibitions

6.0 Surface water supplies for private or semi-private watersupplies shall be prohibited.

6.1 Cisterns shall be prohibited.

6.2 Cross connections shall be prohibited. No cross connection between a

private source of water supply shall be allowed.

6.2.1 Other cross connections for whatever purpose shall not be allowed without a written permit from Massachusetts Department of Public Health.

6.3 Wells used for domestic water supply shall not be used to provide water for ground water heat pump systems or for water cooling or air conditioning systems. Any wells used for such heating or cooling 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 other water supply and that the yield of such well is sufficient to provide a sufficient quantity of water to satisfy the manufacturer's recommendations for proper equipment operation.

Regulation 7: Enforcement

7.0 Variances:

7.0.1 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 not conflict with the spirit of these minimum standards. Any variance granted by the Board of Health shall be in writing.

7.1 Variance, Grant of Special Permission, Expiration, Modifications, Suspension of.

7.1.1 Any variance of 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 in 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 had been notified in writing and has been given an opportunity to be heard.

7.2 General Enforcement:

7.2.1 The provisions of Article 1 of the State Environmental Code shall govern the enforcement of these regulations

7.3 Orders: Service and Content

7.3.1 If an examination as provided for in regulations

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.

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

Regulation 8: ADOPTION AND DATE of EFFECT

These rules and regulations were adopted by vote of the Board of Health, Town of Norfolk, Massachusetts, and are to be in full force and effect on and after April 1, 1980, and shall, before said date, be published in this Town and a copy thereof shall be deposited in the office of the Town Clerk.

Regulation 9: Abandonment or Treatment of on-site water supply wells found to be contaminated

At the time of connection to the Town Water System of a property having a private on-site well water supply, such water supply shall be sampled and tested. Otherwise, such private well water supply shall be abandoned in a manner as provided herein.

Any water supply well found to be contaminated With any chemical compound in excess of the Maximum Contaminant Level (MCL) as determined by the U.S.E.P.A., or the Commonwealth of Massachusetts, Department of Environmental Protection (DEP) or the Norfolk Board or Health shall be abandoned, filled, and capped within 120 days of connecting to the Town of Norfolk Water Supply System. If the water analysis shows the well to be contaminated, it may be re-sampled and tested within 30 to 45 days following the initial sampling. If the second test shows no contamination, a third sampling and analysis shall be performed within 30 and 45 days from the second sampling in order to verify the results. If the second and third tests show no contamination, the well shall be considered not contaminated at the time of that sampling.

Such abandoned well shall be filled with low permeability soil except for the upper 5 feet which shall be filled with Portland Cement Mortar or concrete. Such well less than 15 feet shall be completely filled with Portland Cement Mortar or concrete.

State law requires that plugging of abandoned wells must be performed by a registered well driller.

All water supply lines from such well, which are inside the building and served by the well, shall be removed. Cross connection of a private well with the Town Water Supply is prohibited.

Should the Town Water Supply not be available, appropriate treatment, in

a manner acceptable to the Board of Health, shall be provided such that the water Quality is in compliance with standards of the U.S.E.P.A. and the Massachusetts DEP and the Norfolk board of Health for such compounds. A maintenance and testing program satisfactory to the Board of Health shall be implemented.

PROCEDURE FOR APPROVAL OF WATER SUPPLY, PRIOR TO OBTAINING BUILDING PERMIT

PRIOR TO APPROVAL OF ISSUANCE OF A BUILDING PERMITS THE WELL WATER SAMPLE MUST EITHER BE FREE OF VOLATILE ORGANICS (VO) OR NOTICE OF ITS PRESENCE MUST SE RECORDED AT THE REGISTRY OF DEEDS.

IF THE INITIAL SAMPLE SHOWS THE PRESENCE OF VO'S, IT IS ALLOWED TO BE RESAMPLED. WHEN A "CLEAN SAMPLE" IS OBTAINED, IT WILL BE APPROVED FOR ISSUANCE OF A BUILDING PERMIT.

PRIOR TO OCCUPANCY, THE WATER MUST BE SAMPLED AGAIN. THIS TIME THE SAMPL£ MUST BE COLLECTED BY THE TESTING LABORATORY.

IF THIS SAMPLE IS CLEAN THE WATER SUPPLY IS APPROVED AS FAR AS VO'S ARE CONCERNED.

IF VO'S ARE DETECTED, THE NOTICE IN THE REGISTRY OF DEEDS, ALONG WITH TREATMENT IS REQUIRED.

ALTERNATELY, IF AFTER A SAMPLE SHOWING THE PRESENCE OF VO'S IS OBTAINED, TWO SUCCESSIVE SAMPLES SHOW NO VO'S DETECTED, THE WATER WILL BE APPROVED.