

Town of Scituate Private Well Regulation

1.0 Purpose and Authority

Acting under the authority conferred by Massachusetts General Law, Chapter 111, Section 31, the Scituate Board of Health (the Board) hereby adopts the following regulation pertaining to permitting, siting, construction, sampling, maintenance, and decommissioning of private wells in the Town of Scituate (the Town). This regulation is intended to protect the quality of the groundwater derived from private wells; the health of residents of the Town served by private wells; and the municipal drinking water supply.

2.0 Definitions and Terms

Abandoned Well: If a private well meets any one of the following criteria in the opinion of the Board, the well shall be considered abandoned and must be decommissioned by a registered well driller:

- (1) Construction was terminated prior to completion of the private well;
- (2) The private well owner has notified the Board of Health that use of the private well has been permanently discontinued;
- (3) The private well has been out of service for at least 2 years;
- (4) The private well is a potential hazard to public health or safety and the situation cannot be corrected;
- (5) The private well is in such a state of disrepair that its continued use is impractical; or
- (6) The private well has the potential to provide a pathway for contaminants from the land surface to an aquifer or from one aquifer to another and the situation cannot be corrected.

Agent: Any person designated and authorized by the Board to oversee and implement this regulation. The agent shall have all the authority of the appointing Board, shall be directly responsible to the Board, and be under the Board's direction and control.

Applicant: Any person who intends to have a private well constructed or altered.

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

Board: Board of Health of the Town of Scituate, Massachusetts or its authorized agent.

Building: Any structure used or intended for supporting or sheltering any use or occupancy.

Casing: Impervious durable pipe placed in a boring to prevent the walls from caving and to serve as a vertical conduit for water in a private well.

Certified Laboratory: Any laboratory that has full certification by the Massachusetts Department of Environmental Protection (MassDEP)

Cistern: a private water system that uses an artificial reservoir or tank to collect and store rainwater or private well water to be used as a source of water.

Complete Application: Includes the following: 1) a complete permit application form that includes the property owner's contact information; and well driller's contact information; 2) proof of well driller's valid State certification and proof of insurance; 3) a plan with a specified scale signed by a professional land surveyor or

professional engineer, showing the location of the proposed private well in relation to existing or proposed above or below ground structures on the property and properties within 200 feet of the proposed well. The plan should show all property lines, public or private ways, cesspools, septic tanks and pump chambers, leaching facilities, buildings, water lines, sewer lines, and subsurface drains within 200 feet of the proposed well. The plan should further identify underground storage tanks (USTs) and any potential source of pollution within 500 feet of the private well; and 4) a permit fee as established by the Board.

Consolidated Formation: Any geologic formation in which the earth materials have become firm and coherent through natural rock forming processes. The term is used interchangeably with the word "bedrock" and includes, but is not limited to, basalt, granite, limestone, sandstone, and shale.

Contaminant: Any physical, chemical, biological or radiological substance or matter in water which, in the opinion of the Board of Health or other regulating agency, would present a threat to public health.

Contamination: The presence of any physical, chemical, biological or radiological substance or matter in water at a concentration and/or for a duration or anticipated duration which, in the opinion of the Board of Health or other regulating agency, would present a threat to public health.

Cross Connection: Any physical connection between two sources of water that in the opinion of the Board may allow the water to flow from one source to the other.

Drilled Well: A private well in which the hole is drilled using means such as rotary, cable tool, or auger into the Consolidated Formation.

Driven Well: A private well in which the hole is driven using means such as rotary, cable tool, or auger into the Unconsolidated Formation.

Dug Well: A private well in which the hole is excavated using means such as a shovel, backhoe or any other means other than those employed in creating drilled wells or driven wells as defined herein.

Dwelling: A privately or publicly owned, permanently fixed structure containing one or more residential units.

EPA: United States Environmental Protection Agency

Foundation Wall: A wall below the floor nearest grade serving as a support for a wall, pier, column or other structural part of a building.

Irrigation Well: Any driven or drilled hole with a depth greater than its largest surface diameter developed to supply water not intended for human consumption, such as for irrigation. These shall not provide drinking water at any point in time to a dwelling or a building unless they meet the requirements of a private drinking water well and have the Board's written approval.

Interim Wellhead Protection Area (IWPA) - An interim well-head protection area, as defined in Massachusetts drinking water regulations, 310 CMR 22.02. Generally, this is a ½-mile radius for sources whose approved pumping rate is 100,000 gallons per day or greater. For smaller sources, the radius in feet is determined by multiplying the approved pumping rate in gallons per minute by 32, and adding 400.

Lot: An area or parcel of land in common ownership, designated by its owner or owners a separate lot on a plan filed with the Town of Scituate and the Plymouth County Registry of Deeds, used or available for use, as the site of one or more buildings.

MassDEP: Massachusetts Department of Environmental Protection

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

Potable Well/Potable Water Supply: Any driven or drilled hole with a depth greater than its largest surface diameter developed to supply water intended and/or used for human consumption. A water supply of sufficient quantity and pressure to meet the needs of the occupants of a dwelling, lot, or building connected with a potable water system or with any other source that the Board of Health or its agent has determined, by requiring the water to be tested, does not endanger the health of any potential user and is fit for human consumption. A source shall be deemed potable if it meets at a minimum all the current primary drinking water standards identified in the current State and Federal regulations or guidelines and this regulation. Other tests may be required by the Board or its agent if it is deemed necessary.

Private Well: Any driven, or drilled hole with a depth greater than its largest surface diameter developed to supply water not subject to regulation by 310 CMR 22.00. Any water system/well serving or intended to serve water for human consumption, domestic uses or irrigation for one dwelling or structure on one lot. Any pit, pipe, excavation, shaft spring casing, hole or other source of water to be used for any purpose of supplying water to be used as a potable drinking water supply or irrigation. The well shall include all of the sources, treatment works and transmission lines to the point where distribution takes place within the building.

Public Water Supply: a system for the provision of water to the public for human consumption through pipes or other constructed conveyances provided by the Town of Scituate, if such system has at least fifteen service connections or regularly serves at least twenty-five individuals.

Semi-Public Water Supply: any well water system serving or intended to serve water for human consumption or for other uses or purposes to multiple dwellings of two or more units or to more than one multiple dwelling under a single ownership and located on the same lot, and shall include; restaurants, schools, institutions, motels, mobile home parks, recreational camps for children, parks and clubs. Said well water system shall serve no more than 24 people and have no more than 14 service connections or serves an average of 25 or more individuals daily for less than 60 days of the year.

Subsurface Sewage Disposal System: A subsurface system consisting of any or all of a septic tank, pump chamber, leaching facility (including reserve area) or cesspool and the piping starting at the exterior foundation wall of the structure connecting all of the various parts of the system, that is designed and constructed for the purpose of disposing of the sanitary sewage.

Static Water Level: The level of water in a private well under non-pumping conditions.

State: Commonwealth of Massachusetts

Structure: Anything constructed or erected at a fixed location on the ground and supported by a foundation wall or slab to give support or provide shelter for any common use and occupancy.

Unconsolidated Formation: Any naturally occurring uncemented, unlithified material, such as sand, gravel, clay, or soil.

Underground Storage Tank: a tank and any underground piping connected to the tank that has at least 10 percent of its combined volume underground, typically storing petroleum or other hazardous substances.

Water systems: the words "water systems," 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.

Well Driller: an individual authorized by certification with MassDEP, under 310 CMR 46.00 or the predecessor regulations, 313 CMR 3.00, by registration with the Department of Conservation and Recreation, to engage in the business and supervise the drilling, altering, or decommissioning of wells in Massachusetts, and who signs and submits the well completion report to MassDEP and the Board of Health.

Well Driller Regulation: the MassDEP Well Driller Program Regulations 310 CMR 46.00: CERTIFICATION OF WELL DRILLERS AND FILING OF WELL COMPLETION REPORTS

Zone I - The protective radius required around a public water supply well or wellfield, as defined in Massachusetts Drinking Water Regulations, 310 CMR 22.02: *Definitions*. For public water supply system wells with approved yields of 100,000 gpd or greater, the protective radius is 400 feet. Tubular well fields require a 250-foot protective radius. Protective radii for all other public water system wells are determined by the following equation: Zone I radius in feet = $[150 \times \log \text{ of pumping rate in gpd}] - 350$.

Zone II - That area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can realistically be anticipated, as defined in Massachusetts Drinking Water Regulations, 310 CMR 22.02: *Definitions*.

Zone A - As defined in Massachusetts Drinking Water Regulations, 310 CMR 22.02:

Definitions:

- (a) the land area between the surface water source and the upper boundary of the bank;
- (b) the land area within a 400 foot lateral distance from the upper boundary of the bank of a Class A surface water used as a drinking water source, as defined in the 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*; and
- (c) the land area within a 200 foot lateral distance from the upper boundary of the bank of a tributary or associated surface water body.

3.0 Private Well Construction Permit Application and Fee

3.1. Any property owner or his designated representative, who wishes to construct a private on-lot well as a source of drinking water or irrigation, shall apply to the Scituate Board of Health for a permit. A well may not be installed until a permit has been obtained from the Board of Health or its agent.

3.2 Each permit application to construct, repair or decommission a private well shall be obtained from the Board of Health and be completed to include all required information. The application is to be accompanied by:

- 1) A plan with a specified scale, signed and stamped by a Massachusetts registered professional land surveyor or professional engineer showing the following:
 - The location and description of all existing or proposed above or below ground structures on the property and adjacent properties within 200 feet of the proposed well
 - All property lines, public or private ways, buildings, water lines, sewer lines, subsurface drains, cesspools, septic tanks, pump chambers and leaching facilities within 200 feet of the proposed well.
 - Underground storage tanks (USTs), landfills, and any other potential source of contamination (including but not limited to agricultural fields, animal feed lots, beauty salons, dry cleaners, funeral homes, furniture stripper/refinisher, gasoline/service station, junk yard, railroad lines, car washes, road salt stockpiles, golf courses, sites with a MassDEP release tracking number) within 500 feet of the proposed well.

The plan submitted as part of the application for the private well shall be submitted concurrently to the Conservation Commission for review.

- 2) A non-refundable permit application fee as established by the Board.
- 3) A copy of the well driller's current well driller certification/State registration and proof of insurance

3.3 The Board of Health shall conduct an initial review of the application within 30 days of receipt of the complete application package. If the Board of Health approves the plan, it shall issue a well permit. If it disapproves, it shall notify the applicant in writing.

3.4 The permit shall be on site at all times that work is taking place.

3.5 A permit shall be obtained prior to installation, repair, or decommissioning. The fee may be waived for repairs.

3.6 Each permit shall expire 1 year from the date of issuance unless revoked for cause. Permits may be extended for one additional 6 month period provided that a written request is received by the Board prior to the one year expiration date. No additional fee shall be charged for a single permit extension of 6 months, provided there is no change in the plans for the proposed private well. More than one extension will not be granted.

3.7 No occupancy permit shall be approved by the Board of Health for any structure served by a private drinking water well until the Board of Health has issued a certificate of compliance. The Board of Health shall not approve an application for a building construction permit until it has determined that the private drinking water supply servicing and/or proposed to service said building and/or structure is adequate.

4.0 Private Well Location

4.1. The applicant shall submit with the application a plan to the Board of Health identifying the location of the proposed well. Said plan shall also identify items listed above in Section 3.2.

4.2 Only one well per building is allowed. Further, no private drinking water well shall be used to supply more than one single family dwelling.

4.3 A well must be located on the lot it serves. Service of more than one lot is prohibited.

4.4 A well may not be installed in a Zone A, IWPA, Zone I or Zone II.

4.5 All private wells must conform to the minimum setback distance identified below and measured in feet:

- (1) property line - 10 feet
- (2) any public or private way, street, roadway - 25 feet
- (3) subsurface sewage disposal system (leaching field or reserve area or cesspool) - 100 feet
Greater distances from leaching facilities may be required by the Board of Health if geologic or groundwater flow conditions so warrant.
- (4) septic tank or pump chamber - 50 feet
- (5) underground storage tank and distribution lines - 100 feet
- (6) building foundation - 10 feet
- (7) sewer line - 50 feet
- (8) subsurface drains - 25 feet
- (9) the grade adjacent to a well shall slope at least 2% to prevent accumulation of surface water.
Provisions should be made to minimize surface water flow over the area of the well.
- (10) active or closed landfill - 500 feet
- (11) hazardous waste site - 500 feet
- (12) stable, barnyard, manure storage - 100 feet

(13) overhead utility – 15 feet

(14) water supply lines must be installed at least 10 feet from and 1.5 feet above any sewer line.

Whenever a water supply line must cross a sewer line, both lines shall be constructed of Class 150 pressure pipe and pressure tested to assure water tightness.

(15) any surface water body (normal high water mark), including wetlands, lake, pond, river, stream, ditch or slough – 100 feet

When possible, private water supplies shall be located in areas above the 100-year floodplain.

4.6 In locating a private well, the applicant shall identify all potential sources of contamination that exist or are proposed within 500 feet of the proposed private well. When possible, the private well shall be located upgradient of all potential sources of contamination and shall be as far removed from potential sources of contamination as possible, given the layout of the premises.

4.7 Each private well shall be accessible for repair, maintenance, testing and inspection. The private well shall be completed in a water bearing formation that will produce the required quantity of water under normal operating conditions.

5.0 Private Well Registration

Property owners shall register all private wells with the Board of Health. This requirement includes those wells constructed prior to the date of the adoption of these regulations. All owners of homes already with one or more private wells must report to and register the well with the Board of Health within six months of this regulation's adoption by the Board of Health. The registration of a well must include the property location including the street address, map, block, and parcel number from the Assessor's office, age of well, location of the well on the property, and whether the well was originally installed for potable or non-potable use.

6.0 Well Drillers

All private wells shall be constructed, installed, repaired or decommissioned by a certified well driller as described in 310 CMR 46.00: CERTIFICATION OF WELL DRILLERS AND FILING OF WELL COMPLETION REPORTS. Any person installing a well by driving, jetting, drilling, or any other method shall be certified, as required by 310 CMR 46.00 or 313 CMR 3.00 (the predecessor regulations). Proof of such certification (certification number) must be submitted to the Scituate Board of Health when the application is filed and must be recorded on the well driller's report. A permit for a private well will not be issued unless the proposed well driller is certified.

7.0 Well Construction

7.1 The private well shall be installed by a certified well driller, who should take into consideration the methods detailed in the EPA's Manual of Water Well Construction Practices and MassDEP's Private Well Guidelines, and any other applicable requirements regarding well installation.

7.2 Any work involving the connection of a private potable well to the distribution system of the residence must conform to the local and State plumbing codes and be inspected, as necessary. All electrical connections between the private well and the pump controls shall be made pursuant to an electrical permit and be inspected, if required. All piping between the private potable well and the storage and/or pressure tank in the house must be made by a registered well driller, including the installation of the pump and appurtenance in the private well or house.

7.3 The private well shall be completed in a water bearing formation that will produce the required quantity of water under normal operating conditions.

7.4 A well must be properly curbed and covered to prevent entrance or contamination and to divert surface drainage away from the well. The top of a well shall be higher than any surface sources of contamination and above any known conditions of flooding by drainage or runoff from the surrounding land unless otherwise

adequately protected, such as being located in a flood proofed well house or fitted with a sanitary seal. For private wells completed above grade, the casing shall extend at least 12 inches above the finished ground surface unless the well is located in a floodplain. When a private well is located in a floodplain, the well casing shall extend at least 2 feet above the level of the highest recorded flood level. The top of the casing shall be reasonably smooth and level.

7.5 Wells must be constructed so as to maintain existing natural protection against all known or potential sources of contamination to groundwater and to exclude all known sources of contamination from entering the well.

7.6 A physical connection is not permitted between a water supply that satisfies the requirements of these regulations and another water supply that does not meet the requirements of these regulations without prior approval of the Board.

7.7 All wells shall be disinfected following construction and well or pump repair before the well is placed into service. If a pump is to be installed by the well driller immediately upon completion of the private well, the well driller shall disinfect the private well and the pumping equipment after the pump has been installed. If the pump is not installed upon completion of the private well, the pump contractor shall, upon installation, disinfect the private well and the pumping equipment. The pump contractor shall also disinfect the entire water supply system after any maintenance or repair work is done on the pump.

7.8 A metal tag shall be affixed to the top of the well casing at the time of installation so that the well may later be located by a metal detector, if necessary.

7.9 Within 30 days after the completion of a private well, the well driller shall provide a copy of the well completion report to the Board of Health. This report must be received prior to issuance of the certificate of compliance by the Board of Health. The report must include all information required by MassDEP, as well as the following if not already required:

- 1) Name of the well owner
- 2) Address of the property served (including the lot number as assigned by the Assessor's office)
- 3) Depth, size, and method of construction of the well
- 4) Static water level
- 5) Yield of the well after pumping
- 6) Signature of the well driller with a statement that the well is in compliance with all requirements of these regulations.

7.10 Within 30 days after the completion of a private well, the following must be submitted in order for the Board of Health to issue a Certificate of Compliance: 1) a final as-built plan with measurement ties; 2) well installation log/certification; and 3) a copy of the analytical laboratory report with satisfactory results per regulation requirements. Measurement ties for the as-built plan shall be associated with standard survey points, such as corners of buildings or other permanent fixed features.

8.0 Water Sampling Procedures and Water Quality Requirements

8.1 All private wells must meet potability requirements regardless of whether the well is being installed to serve as a private potable well or to provide irrigation only.

8.2 For purposes of this regulation, the sampling parameters and concentration limits for potable wells identified in Appendix A are the required sampling parameters and concentrations for all private wells, regardless of intended use. However, as the parameters and concentrations are updated by MassDEP after the adoption of this regulation, the recommended sampling parameters and the concentration limits for a potable well provided in the current version of MassDEP's Private Well Guidelines supersede Appendix A and

become the required sampling parameters and concentrations for all private wells, regardless of intended use. It is the applicant's (owner's) responsibility to ensure that the analysis includes the correct parameters.

8.3 The water shall be analyzed by a State certified laboratory using EPA and MassDEP approved analytical methods at the owner's expense, and a copy of the laboratory report submitted to the Board of Health for review. A certificate of compliance will not be issued if these requirements are not met and the well may not be put into service until the certificate of compliance has been issued by the Board of Health.

8.4 Water samples shall be collected and analyzed prior to the installation of any water treatment devices.

8.5 The owner of a rental property should make results of all water quality tests available to all tenants of a property and the Board of Health. In cases where the well water does not meet the water quality standards, the Board of Health may require the property owner to provide an alternative source of drinking water approved by the Board for the tenants.

8.6 For wells that have undergone repair or pump or plumbing modification, a sample shall be collected after disinfection and flushing for analysis by a State certified laboratory for total coliform bacteria analysis and any other parameter(s) deemed appropriate by the Board before being returned for service.

8.7 The well owner must submit a copy of the laboratory report and chain of custody to the Board of Health anytime a sample is collected from a private well (potable and non-potable) for laboratory analysis.

8.8 After the private well has been completed and disinfected, and prior to the Board of Health issuing the certificate of compliance, the owner or his agent shall collect a sample from the well for laboratory analysis. The cost of all water testing is the responsibility of the applicant. Failure to meet the current primary drinking water levels constitutes a reason for disapproval of the private well. The Board may require that testing be repeated annually after the well is approved and installed to serve a dwelling at the owner's expense if the Board feels a potential health hazard exists.

8.9 Following a receipt of the water quality test results, the applicant shall submit a water quality report to the Board which includes:

- (1) A copy of the Certified Laboratory's test results;
- (2) The name and contact information of the individual who performed the sampling;
- (3) The location in the system in which the water sample was obtained;
- (4) Water sample chain of custody.

8.10 The Board reserves the right to require retesting of parameters, or testing for additional parameters when, in the opinion of the Board, it is necessary due to local conditions or for the protection of the public health, safety and welfare. All costs and laboratory arrangements for the water testing are the responsibility of the applicant/owner.

8.11 When the Board of Health deems it necessary, the health agent or other agent of the Board of Health may be present to witness sample collection or may collect the water sample and deliver it to the certified laboratory for analysis. The cost of sample analysis will be incurred by the owner of the well.

8.12 If the water from a private well that serves as the drinking water supply for a building does not meet required concentrations following laboratory analysis at any time, the Board of Health may require that the property owner provide an alternative approved source of drinking water for the inhabitants of the building served by the well.

8.13 If the water from a private well that serves as an irrigation well for a property does not meet the required concentrations for parameters identified in Appendix A or the subsequent parameters and concentrations

recommended in the current version of MassDEP's Private Well Guidelines published following adoption of this regulation for a potable well following laboratory analysis at any time, then the well may not serve the property as an irrigation well.

8.14 A new or existing well in which arsenic, lead, or radon levels do not meet acceptable levels may not be approved as a drinking water source. If the well is approved as a potable water source, it must be equipped with a treatment device to reduce concentrations to acceptable concentrations at each point in a building in which water may be used as a drinking water source. Following installation of an acceptable treatment device, results from two consecutive tests from appropriate sampling points must meet acceptable limits to be used as a drinking water source. If treatment is necessary, the Board may require a deed notification be recorded at the Plymouth County Registry of Deeds so that any future owner will be informed of the unacceptable chemical concentrations in untreated well water and the need for continuous treatment and maintenance of such a device. Proof of this must be provided to the Board prior to deeming the well acceptable for use as a potable water supply.

9.0 Private Well Inspection and Sampling at the Time of Property Transfer

9.1 Prior to selling, conveying, or transferring title to real property, the owner shall have tested the water of every private well serving that property. A water sample from each well should be submitted to a Massachusetts certified laboratory for testing for the parameters per the requirements identified in Tables 1 and 2 of Appendix A. However, as the parameters and concentrations are updated by MassDEP after the adoption of this regulation, the recommended sampling parameters and the concentration limits for a potable well provided in the current version of MassDEP's Private Well Guidelines supercede Appendix A and become the required sampling parameters and concentrations. This water quality testing should have been performed not more than one (1) year prior to transfer of the property. The results of the water quality testing should be submitted to the Board of Health prior to property transfer. Additionally, a well inspection will be performed that includes identifying the location of the private well.

9.2 The seller shall provide a copy of the private well as-built plan and test results to the Scituate Board of Health within 30 days after the inspection has been completed and to the buyer prior to the closing.

9.3 Persons intending to purchase a home served by a private well should request the results of available water quality analyses and/or have the well sampled and tested for the parameters per the requirements identified in Tables 1 and 2 to establish a water chemistry baseline based on the parameters listed. For all wells, a raw water sample should be taken to ensure that the well water is of good quality. For wells with a treatment system, a sample from a household tap should also be taken to ensure that the system is functioning properly.

10.0 Well Decommissioning Requirements

10.1 Abandoned wells, test holes, and borings shall be decommissioned so as to prevent the private well, including the annular space outside the casing, from being a channel allowing the vertical movement of water.

10.2 The owner of the private well shall have the private well properly decommissioned if the private well meets any of the following criteria in the opinion of the Board:

- (1) Construction of the private well is terminated prior to completion of the private well;
- (2) The private well owner notifies the Board that the use of the private well is to be permanently discontinued;
- (3) The private well has been out of service for at least 2 years;
- (4) The private well is a potential hazard to public health or safety and the situation cannot be corrected;
- (5) The private well is in such a state of disrepair that its continued use is impractical; or
- (6) The private well has the potential to provide a pathway for contaminants from the land surface into an aquifer or from one aquifer to another and the situation cannot be corrected.

10.3 The property owner shall be responsible for ensuring that all abandoned wells and test holes or borings associated with private well installation are properly plugged.

10.4 Only certified well drillers may decommission wells and must do so in accordance with section 3 of this regulation and MassDEP's Private Well Guidelines.

10.5 In the case of new private well construction, all test holes and borings shall be plugged before the well driller completes work at the property.

10.6 The plugging materials shall be introduced at the bottom of the private well or boring and placed progressively upward to a level approximately 4 feet below the ground surface. Sealing materials shall never be poured from the land surface into the private well, borehole, or annular space being sealed.

10.7 The Board of Health requires that documentation be provided from the well driller confirming that abandonment has been completed in a method that conforms with the requirements of these regulations.

10.8 A well that is decommissioned shall be destroyed to protect the groundwater supply and to eliminate potential physical hazards. Wells shall be sealed with non-hazardous, impervious materials that shall be permanently in place. All exposed casing materials and pumping equipment shall be removed. The excavation shall be returned to the existing grade of the surrounding land. A record of decommissioning shall be kept in accordance with these regulations.

10.9 Within 30 days after the decommissioning of any well, the well driller shall submit a report containing the following:

- (1) The name of the owner of the well
- (2) The address of the property served
- (3) Method of sealing, including materials used
- (4) Person or persons sealing the well and the date the well was sealed

The report shall be signed by the well driller and shall constitute a statement of compliance with all requirements of these regulations.

11.0 Prohibitions

11.1 Surface water supplies for private or semi-public water supplies shall be prohibited.

11.2 Aboveground cisterns shall be prohibited.

11.3 Cross-connections shall be prohibited. No cross connection between a private source of water supply and a public water supply shall be allowed. Other cross-connections for whatever purpose shall not be allowed without a written permit from Massachusetts Department of Public Health.

11.4 The Board of Health may require the owner of an existing building or buildings, wherever a public water line is accessible in an abutting way, to cause such building or buildings to be connected with the public water line in a manner and within a period of time satisfactory to the Board of Health.

11.5 No lot may be served by both the public water supply and a private drinking water well.

11.6 The well shall not be placed into operation until a certificate of compliance has been issued.

11.7 Dug wells shall be prohibited.

11.8 A residence or other structure may not be served by both a public water supply and a private potable well.

12.0 Variances

12.1 Variances to these regulations may be granted by the Board of Health if, in their opinion, it would do manifest injustice and the applicant proves that the same degree of public health and environmental protection as required under these regulations can be achieved.

12.2 Every request for a variance shall be made in writing and shall state the specific variance sought and the reasons therefore. The request shall contain all the information needed to assure the Board that, despite the issuance of a variance, public health will be protected. Notice of the hearing shall be given by the applicant or the applicant's agent at least 10 days prior thereto by certified mail to all immediate abutters to the property upon which the private well is to be located. The notice shall include a statement of the variance sought and the reasons therefore.

12.3 The Board of Health may, after a public hearing, grant a variance to the application of any provision of these regulations 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, and the applicant has demonstrated that the equivalent degree of protection will still be provided to the private water supply without strict application to particular provisions of these regulations. Any variance granted by the Board of Health shall be in writing. Any denial of a variance shall be in writing and shall contain a brief statement of the reasons for denying the variance. A copy of any such variance shall, while it is in effect, be available to the public at all reasonable hours in the office of the Board of Health. Any person aggrieved by the decision of the Board may appeal said decision within 30 days in a court of competent jurisdiction.

12.4 Any variance may be subject to such qualification, revocation, suspension, condition or expiration as is provided in these regulations or as the Board expresses in its granting of the variance. A variance 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, pursuant to Section 14.0 of this regulation.

12.5 As a condition of granting a variance, the Board of Health may require a deed restriction be recorded at the Plymouth County Registry of Deeds.

13.0 Enforcement

13.1 These regulations cannot be construed as a guarantee by the Town, or its agents, that the private water system will function satisfactorily.

13.2 The Board of Health may require a deed restriction be recorded at the Plymouth County Registry of Deeds in cases that, in the opinion of the Board of Health, the water analyses show marginal compliance with the criteria of this regulation.

13.3 The Board, or its agent, shall investigate violations of these regulations, and may take such actions as the Board deems necessary for the protection of public health and the enforcement of this regulation.

13.4 If an investigation reveals a violation of these regulations, the Board may order the person responsible to comply with the violated provision(s) within 30 days or such other time period as the Board deems necessary and/or appear before the Board at a public hearing.

13.5 Every order authorized by this regulation shall be in writing and all orders shall be served on the designated responsible person (owner) in the following manner:

- a. personally, by any person authorized to serve civil process, or
- b. by leaving a copy of the order at his last and usual place of residence or abode, or
- c. by sending him a copy of the order by registered or certified mail, return receipt requested, if he is within the Commonwealth, or

d. if his last and usual place of abode is unknown or outside the Commonwealth, by posting a copy of the order in a conspicuous place on or about the affected premises.

13.6 Any order issued under the provisions of these regulations shall:

- a. include a statement of the violation, or defect, and may suggest action which if taken will effect compliance with this regulation, and
- b. allot a reasonable time for any action it requires, and
- c. inform the person to whom it is directed of their right to a hearing, of their responsibility to request the hearing, and to whom the request shall be made.

13.7 The Board may suspend or revoke any permit upon a finding that the holder of said permit has violated any provision of this regulation or has failed to comply with any lawful order of the Board pursuant to this regulation.

14.0 Hearing

14.1 The person or persons to whom any order has been served may request a hearing before the Board by filing with the Board within 7 days after the day the order was served a written petition requesting a hearing on the matter. Upon receipt of such petition, the Board shall set a time and place for such hearing and shall inform the petitioner thereof in writing. The hearing shall be commenced not later than 30 days after the day on which the order was served. The Board, upon application by the private well owner, may postpone the date of hearing for a reasonable time beyond such 30 day period if in the opinion of the Board the private well owner has submitted a good and sufficient reason for such a postponement.

14.2 At the hearing, the petitioner shall be given an opportunity to be heard and to show why the order should be modified or withdrawn. After the hearing, the Board shall sustain, modify or withdraw the order and shall inform the petitioner in writing of its decision. If the Board sustains or modifies the order, it shall be carried out within the time period allotted in the original order or in the modification.

14.3 Every notice, order or other record prepared by the Board in connection with the hearing shall be entered as a matter of public record in the office of the Board of Health.

14.4 If a written petition for a hearing is not filed with the Board within 7 days after the day an order has been served or if after a hearing, the order has been sustained in any part, each day's failure to comply with the order as issued or modified may constitute an additional offense.

15.0 Appeal

Any person aggrieved by the final decision of the Board may seek relief therefrom within 30 days in any court of competent jurisdiction, as provided by the laws of this Commonwealth.

16.0 Penalties

Any person that violates any provision of this regulation or fails to comply with any order by the Board may be fined up to \$100.00 for each offense in accordance with Massachusetts General Law Chapter 40, Section 21D. Each provision of this regulation that is violated and each day that a violation continues may constitute a separate offense. Each day's failure to comply with an order may constitute a separate violation of this regulation.

17.0 Board of Health Responsibility

The maintenance of a private well is the well owner's responsibility. The Scituate Board of Health will enforce this regulation within the scope of its authority. The responsibility of future monitoring, maintenance, testing, and treatment is that of the well owner.

18.0 Severability

If any provision of this regulation or the application thereof is held to be invalid by a court of competent jurisdiction, the invalidity shall be limited to said provision(s) and the remainder of this regulation shall remain valid and effective.

19.0 Disclaimer

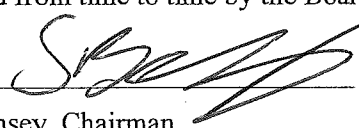
The issuance of a well construction permit shall not be construed as a guarantee by the Board of Health or its agents that the water system will function satisfactorily nor that the water supply will be of sufficient quality or quantity for its intended use.

20.0 Other Permits

Applicants for well permits are reminded that they may be required to obtain plumbing, electrical, and/or building permits. It is suggested that applicants contact the Building Department for further guidance.

21.0 Adoption and Effective Date

21.1 This regulation was adopted by vote of the Town of Scituate Board of Health at their regularly scheduled meeting held on June 12, 2017 and is to be in full force and effect on June 13, 2017. Before said date, a summary of this regulation has been published. A copy has been placed on file the Board of Health Office and filed with the Department of Environmental Protection. This regulation or any portions thereof may be amended, supplemented or repealed from time to time by the Board, with notice as provided by law, on its own motion or by petition.



Steven Pansey, Chairman



Russell Clark, Board of Health Member



Doug Whyte, Board of Health Member

APPENDIX A

SAMPLING REQUIREMENTS

For newly constructed wells:

A raw water sample should be obtained from the well and analyzed for all of the parameters listed in Tables 1 and 2 at least once to assess the suitability of the well water and to establish a baseline of the well water chemistry. These baseline results can be compared to subsequent water quality analyses to determine whether any changes in water quality are occurring that may indicate a contaminant threat.

The raw water results are used to determine if and what type of treatment is necessary to ensure that the water in the well meets potability requirements. In no event should a water treatment device be installed prior to baseline sampling. If a treatment system is installed and the well is to be used as the building's source of drinking water, a sample taken from a tap post treatment should be taken and analyzed for the contaminant(s) of concern to ensure the system is functioning properly prior to occupancy. If the well is to be used for irrigation, a subsequent sample should be collected from the well to confirm that the water meets potability requirements.

If current or historic land uses indicate commercial or industrial activities in the vicinity of the well, then testing for parameters in addition to those listed in Tables 1 and 2 may be warranted, in accordance with the MassDEP Private Well Guidelines.

For Existing Wells:

Each year, preferably in the spring, all private wells shall be tested for total coliform bacteria and nitrate/nitrite (Table 1). If total coliform bacteria is detected, the well water should be sampled for *Escherichia coli* (*E. coli*) to determine if wastewater has contaminated the well.

Total coliform bacteria and nitrate/nitrite shall be tested for annually as they can both represent acute exposure risks that can change over a short period of time. Coliform bacteria include both non-pathogenic bacteria that occur naturally in the environment and fecal coliforms associated with wastewater. *E. coli* is one of the most common species of fecal coliform bacteria. *E. coli* is used as an indicator organism in drinking water to determine if a well has been impacted by either animal or human wastes containing pathogenic or disease-causing organisms.

At least once every 10 years homeowners shall test for parameters listed in Table 2. These results should be compared to the previously collected water chemistry results to see if any adverse changes have occurred in water quality.

If any of the limits noted in Tables 1 and 2, are exceeded, a second water quality test should be conducted to confirm the results of the first analysis. If the limit is exceeded in the second analysis, treatment may be necessary. If treatment is necessary, consult the well driller or water treatment expert for the appropriate treatment methods required to address the particular contaminant(s) of concern.

Tables 1 and 2 include possible interpretations of those test results.

Table 1 : Water Quality Testing- Initial and Annual Basis

Test	Interpreting The Results	
	Analytical Maximim Concentration:	If the concentration is elevated:
Total Coliform Bacteria	Present	<ol style="list-style-type: none"> 1. Collect another sample to test for <i>E.-coli</i>. 2. Discontinue using water directly from the tap until the results of the <i>E. coli</i> test are received. 3. If the presence of <i>E.coli</i> is confirmed, consult a water treatment professional immediately, as a treatment system may be necessary. <i>Do not consume the tap water directly</i>, either boil the water first, or use bottled water until the problem is resolved. 4. If <i>E. coli</i> is not detected, investigate and eliminate possible sources of contamination and disinfect the well. 5. Retest the well. If recurrent problems persist, consult a water treatment professional.
Nitrate/Nitrite(total)	10 mg/L	Collect a re-sample to confirm. If contamination is confirmed, install a water treatment system or find an alternate water supply. Consult a water treatment professional for guidance.

mg/L: milligrams per liter

Table 2: Water Quality Testing- Initially and Every 10 years

Test	Interpreting The Results		
	Analytical Maximim Concentration	If the concentration is elevated::	In addition:
Arsenic	0.010 mg/L	1. Collect a re-sample to confirm. 2. Compare to previous results 3. Contact the BOH or water quality professional for guidance. 4. Depending upon contaminant and concentration, options may include installing a treatment system or finding an alternate water supply. The appropriate water treatment system depends on the overall water chemistry and the constituents that need to be removed.	Information on probability of arsenic and uranium in well water in MA communities is available on the MassDEP website. If radon is detected in water, test indoor air. Lead and manganese are of particular concern to young children.
Lead	0.015 mg/L		
Manganese	0.3 mg/L		
Copper	1.3 mg/L		
Fluoride	4 mg/L		
Sodium	20 mg/L		
Gross Alpha Screen ⁽¹⁾	5 pCi/L		
Radon-222 ⁽¹⁾	10,000 pCi/L		
Radium 226 & 228 ⁽²⁾	5 pCi/L		
Uranium ⁽²⁾	0.03 mg/L		
Volatile Organic Compounds	Above MA Maximum Contaminant Levels (MMCL)		
Chloride	250 mg/L	These parameters affect water taste and odor.	Measurement necessary for efficient design of water treatment system
Hardness	<50 mg/L or >200 mg/L		
Iron	0.3 mg/L		
pH	<6.5 or >8.5		

“<” means “less than”; “>” means “greater than”

mg/L: milligrams per liter

pCi/L: picocuries per liter

(1): See figure 1 for guidance; this shall be included as part of sampling.

(2): See figure 1 for guidance; If the gross alpha screen results identify gross alpha greater or equal to 5 pCi/L then the sample should be submitted for radium 226 and 228 analysis. If the gross alpha screen is greater or equal to 15 pCi/L, then the sample should be submitted for uranium analysis.

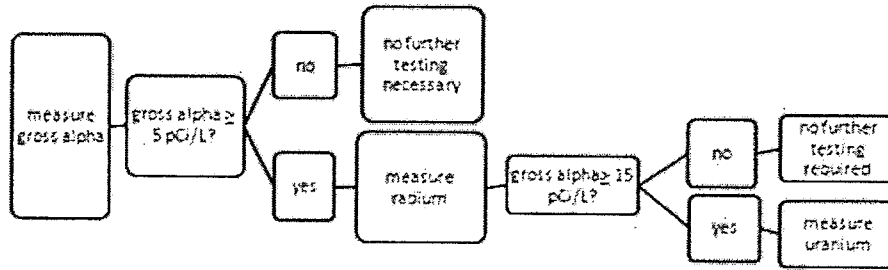


Figure 1: Radionuclide testing decision diagram

The Board of Health may require more frequent testing, or testing for additional parameters, where other water quality problems are known or suspected to exist. The Board can also require the use of an unbiased third party to collect water quality samples. The Board can reserve the right to require re-testing of the above parameters, or testing for additional parameters when, in the opinion of the Board, it is necessary due to local conditions or for the protection of public health, safety, welfare and the environment. In any case where a private drinking water well does not meet such standards or guidelines, the Board may require the property owner to treat the water or provide an alternative source of drinking water.