

TOWN OF WESTFORD
BOARD OF HEALTH TOWN HALL
WESTFORD, MASSACHUSETTS 01886
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WATER SUPPLY REGULATIONS

Adopted December 12, 1978
Amended December 7, 1987
Amended April 13, 1998
Amended January 28, 2008
Amended February 11, 2013
Amended August 12, 2013
Amended April 10, 2017
Amended January 14, 2019

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DEFINITIONS

The Board of Health of the Town of Westford, Commonwealth of Massachusetts (the Board), acting under Chapter 111, Section 31, of the General Laws as amended, and with reference to Chapter 40, Section 54 of said General Laws, restrictions on issuance of building permits, and by any other power thereto enabling, and acting thereunder and in accordance therewith, has, in the interest of and for the preservation of the public health, duly made and adopted the following rules and regulations:

The word “WELL”, as used in these regulations, shall include any pit, pipe, excavation, casing, drill hole or other source of water to be used for any purpose of supplying potable water, irrigation water, process water, or water for a Ground Source Heat Pump (GSHP) in Westford.

The word “WELL” also applies to shallow groundwater injection wells, such as dry wells, used to discharge storm-water to the subsurface. In these regulations, the word “WELL” does not include groundwater monitoring wells installed for complying with Massachusetts statutes and regulations. Monitoring wells must comply with Massachusetts Department of Environmental Protection (Mass DEP) Guidance WSC #91-310: Standard References for Monitoring Wells.

The words “IRRIGATION ONLY WELL” shall mean a well, used to water lawns, crops, gardens or for other outdoor-only purposes. An IRRIGATION ONLY WELL cannot be used as a source of drinking water, and is a secondary source of water.

The words “GSHP WELL” or GROUND SOURCE HEAT PUMP WELL, shall mean any Class V well as defined by 310 CMR 27.03(5) that uses heat transferred to or from the earth to heat and/or cool a structure.

The words “UNDERGROUND INJECTION POINT” in the Town of Westford shall mean any Class V well as defined by 310 CMR 27.03(5) that is used to return storm-water to the ground.

The words “DRY WELL” shall mean a subsurface pit with open-jointed lining or holes through which storm-water drainage from roofs, basement floors, foundations or other area seeps into the surrounding soil. It is also classified as a “Shallow Class V Well”.

The word “BOARD” shall mean the Board of Health of the Town of Westford, Massachusetts.

The word “DEPARTMENT” shall mean the Westford Health Department

The words “” SECONDARY SOURCE OF WATER” shall mean any well not used for drinking water purposes. Lakes, ponds, streams, and similar surface waters are not considered a secondary source. A “secondary source of water” may be subject to temporary suspension of use if that source in the event of drought is causing low ground water or a cone of depression that affects an abutting or nearby drinking water wells.

The words “AREA OF SPECIAL CONCERN”, as used in these regulations, shall refer to areas designated by the Board as of special concern because structures in the area have been provided with access to potable water from the Town of Westford Public Water System or from another public water system because of groundwater contamination resulting from a release of oil or hazardous material either directly into groundwater or to the surface or subsurface and which has migrated into groundwater, and to meet the requirements of a Response Action Outcome (RAO) filed pursuant to the Massachusetts Contingency Plan (MCP) (310 CMR 40.0000). Groundwater contamination shall be defined as concentrations of oil or hazardous materials in groundwater above applicable standards and requirements of the MCP, or defined as contaminated under other Massachusetts statutes. In situations where there is evidence that continued use of groundwater is an actual or potential risk of harm to human health, human welfare, or the environment, the Board may designate an “AREA OF SPECIAL CONCERN” prior to the filing of the RAO.

The words “WATER SYSTEM”, as used in these regulations, shall include all components necessary for a completely workable system, such as 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. WATER SYSTEM, as used in these regulations, and these regulations have no application to the municipal water supply system operated by the Water Department of the Town of Westford or to any other water system from a neighboring town that supplies municipal water to a Town of Westford address.

The words “DRINKING WATER STANDARDS” as used in these Regulations shall mean the Massachusetts Maximum Contaminant Levels (MMCLs) listed in 310 CMR 22.00. The MMCLs are enforceable by the Commonwealth for any drinking water delivered to consumers through a Public Water System, but are also recommended by the Massachusetts Department of Environmental Protection (Mass DEP) for evaluating the potability of private water supplies.

WELL DRILLERS CERTIFICATES & PERMITS

A. CERTIFICATES

Every owner of a company installing wells in Westford shall be required each year to provide the Board with a copy of their well driller’s certificate issued by the appropriate governing agency of the State of Massachusetts.

B. PERMITS

Licensed installers, or the owner, shall pay the required fees The fees for each well shall be stipulated in the Board’s “Schedule of Fees” available from the Board. Failure to pay this fee will result in a double fee and may also result in a fine for violations of this regulation. Permits must be completed and returned to the Board after completion of the job. The Westford Health Department will not issue a Well Certificate if the completed permit, and required reports are not returned to the Department.

The installer shall employ all reasonable sanitary measures and precautions in the performance of their work in order to prevent pollution or contamination of the well or environment. A free-chlorine residual of 10 mg/l shall be maintained in any water used at the drill site. Water from wetlands, swamps, ponds, streams and other similar surface features shall not be used.

All drilling equipment including pumps and down hole tools, shall be cleaned and disinfected prior to drilling each new well or test hole.

All drilling fluids shall be nontoxic. Drilling fluid additives shall be stored in clean containers and shall be free of material that may adversely affect the well, the aquifer, or the quality of the water to be pumped from the well, surfactants should be biodegradable. The use of biodegradable organic polymers shall, when possible, be avoided.

MINIMUM REQUIREMENTS

A. DRILLED WELLS: shall have, at a minimum

1. A 6-inch diameter casing of schedule 40 pipe.
2. Such casing shall be set sufficiently into solid bedrock to act as a seal to keep out surface water; a minimum of 12 feet shall be considered sufficient.

B. DUG, DRIVEN AND WASH(Jetted) WELLS shall have: least 15 feet of sealed casing.

C. GROUND SOURCE HEAT PUMP WELLS: shall comply with the Mass DEP Regulations:

1. Massachusetts “Guidance for Ground Source Heat Pump Wells”, Underground Injection Control Program, January 2012 (and as revised or amended from time to time)
2. Massachusetts Underground Injection Control Program Regulations (310 CMR 27.00)
3. Massachusetts Groundwater Discharge Permits (314 CMR 5.00)
4. Massachusetts Well Driller Certification Program (310 CMR 46.00)
5. Massachusetts Water Management Act Program, Bureau of Resource Protection, November 2005 (and as revised or amended from time to time)

POTABLE WATER

A. Each dwelling in the Town of Westford must have its own potable water well except for Community Water Systems. The well shall be located on the lot that it serves. Wells shall be not less than 100 feet in distance from all septic tanks and leaching fields, not less than 50 feet from all lot lines, and not less than 25 feet from wetland resource areas protected under the Wetlands Protection Act, Mass. General Laws, c.131, s.40, and the Westford Wetland Protection Bylaw and Regulation. For new construction, the required lot line offset distance may be reduced with a variance to no less than 10 feet. Variance applications for wells serving new construction shall not be deemed complete until abutters within 100 feet of the proposed well have been notified of the variance request via certified mail and first class mail a minimum of 10 days before the

public hearing at which the variance request is scheduled to be heard. Replacement wells for existing dwellings may be allowed fewer than 10 feet from a lot line or wetland if the applicant shows that greater lot line offset distances are not feasible and all plans for wells proposed fewer than 10 feet from any lot line bear the original stamp and signature of a Massachusetts Registered/Professional Land Surveyor (RLS/PLS).

ADEQUATE SUPPLY

Each well must supply an adequate quantity of water for the purpose for which it is intended and shall be tested to give satisfactory evidence of continuing capability to do so. Before being approved, every well shall be pump tested by the installer. The results of the test shall be submitted to the Board on a form prescribed by the Board and the Board shall maintain such as a public record. The following are guidelines for what will be considered satisfactory, but the Board may vary such in particular cases where it is demonstrated that the well will furnish an adequate supply of water for purpose for which it was intended.

A. After pump testing, all washed wells, points, pits or excavations for potable use shall produce a minimum of 15 gallons per minute.

B. After pump testing, all drilled potable water wells shall produce at least the following gallons per minute:

Static water depth in well		Required yield
100 feet deep	-	6 gallons per minute
200 feet deep	-	5 gallons per minute
300 feet deep	-	4 gallons per minute
400 feet deep	-	3 gallons per minute
500 feet deep	-	2 gallons per minute

If the water depth is above a stated level shown on the chart above, then the next highest required yield shall be used.

Note: F.H.A. or V.A. requirements may vary from the above requirements.

ANYALICIAL WATER QUALITY TESTING

For potable water wells, the Board will require the submission of a water quality analysis report by a laboratory approved by the Board and the Massachusetts Department of Environmental Protection (Mass DEP). The analytical report shall demonstrate to the satisfaction of the Board that the water under consideration is potable and meets current drinking water standards as defined by the Massachusetts Drinking Water Standards, 310 CMR 22.00 – Massachusetts Maximum Contaminant Levels (MMCLs). All water samples for regulatory purposes must be drawn by personnel from a Massachusetts certified laboratory, Massachusetts certified well driller, Massachusetts Certified Home Inspector, Massachusetts licensed Title 5 inspector (if the water quality analysis is taken as a requirement of a title 5 inspection), or other person approved by the Board of Health prior to sample collection. All water analysis reports shall include the

name and credentials of the person drawing the sample(s) and shall also include a copy of the chain-of-custody form.

The analysis for potable water wells must include, but is not limited to the following tests: Coliform Bacteria, Nitrate/Nitrite, Hardness, pH, Sodium, Chloride, Iron, Manganese, Lead, Copper, Arsenic, Fluoride, Radon and Uranium.

The Board recommends that property owners repeat water testing of private wells used for drinking water every (3) three years to ensure that their private water supply has not become contaminated.

WELL WATER MITIGATION SYSTEMS

Treatment of well water for new or replacement wells, must meet the standards of these regulations, particularly to meet the arsenic and radon/uranium standards or guideline values in bedrock wells. If treatment is found to be necessary, point-of-entry (POE) devices must be installed in such a fashion so as to ensure that the water supply is properly treated and that water provided at all taps and faucets inside or outside the building is treated water. Proposed treatment devices may be subject to meet Board approval regarding system certification, applicability and installation. Once installed, a water analysis must be submitted to the Board indicating that the water in question meets currently established drinking water standards or guideline values. In addition, the Board or its agent may require subsequent water quality tests as proof of treatment effectiveness. The deed or other recordable document for the property served by a well in which unacceptable levels of a water quality parameter are detected in the untreated raw water shall contain a Restriction or Covenant that will serve to inform future owners of the untreated levels and the need for treatment equipment and maintenance of that treatment equipment. To promote and preserve public health, the Board may require that structures that utilize treatment systems to meet the MMCLs be connected to the public water supply where said water supply is within one hundred (100) feet of the lot frontage or when said supply becomes available. The Board shall not approve use of point-of-use systems (POU) to meet the MMCLs. Point-of-use units can be used to improve taste and palatability of water only.

SALE OR TRANSFER

Upon sale or transfer of property, the Board shall require a copy of a laboratory report for potable water wells only. the water quality parameters including in the initial testing. The sample shall have been collected and analyzed within (1) one year of the closing date of sale or transfer of property.

PERCHLORATE MONITORING AREA

Perchlorate shall remain as a required testing parameter in these regulations for all new construction, property sales, existing wells, replacement wells, and irrigation wells indefinitely within the defined perchlorate monitoring area. The Perchlorate monitoring area shall be defined as the northern portion of public and private lands, that are described as follows. Starting on the Western Boundary of Westford, following the railroad tracks easterly, to Depot Rd. Then

following Depot Rd. Northerly, to the intersection of Nutting Rd. then following Nutting Rd. then following Dunstable Rd. Northwesterly to the intersection to the Town Line. All property addresses listed on said streets and within this described boundary must continue to test for perchlorate. See Appendix "A"

IRRIGATION ONLY WELLS

1. An Irrigation Only well cannot be connected to any drinking water supply and can only connect to sprinklers or spigots mounted on or near the well head. No spigots can be mounted to the house from an irrigation well.
2. Irrigation only wells must be marked with signage on the well head that reads "IRRIGATION ONLY"
3. Irrigation only wells are not required to produce a quantitative yield.
4. Drinking water wells that no longer provide adequate yield or water quality shall be registered with the Board as irrigation-only wells or shall be abandoned in accordance with Mass DEP guidelines.
5. Irrigation only wells used to water commercial or private food supply crops only will not be subject to shut down.
6. New Irrigation Only Wells shall undergo analytical testing in accordance with these regulations.

Wells installed for irrigation only must have at least 15 feet of sealed casing and must not have any connection to wells or water lines from wells used for potable use and must not have any connection to the public water supply. Wells installed for irrigation only must demonstrate that there is an adequate supply of water for the purpose intended. Irrigation only wells shall be not less than 50 feet in distance from all septic tanks and leaching fields, not less than 25 feet from all lot lines, and in compliance with wetland resource areas protected under the Wetlands Protection Act, Mass. General Laws, c.131, s.40, and the Westford Wetland Protection Bylaw Chapter 171 and Wetland Rules and Regulations Chapter 235:

The analysis for irrigation only wells must include: Coliform Bacteria, Nitrate/Nitrite, Hardness, pH, Sodium, Chloride, Iron, Manganese, Lead, Copper, Arsenic, and Fluoride. Other requirements may be included at the discretion of the Board, including Perchlorates, and Volatile Organic Compounds (VOCs) in areas where there has been known or suspected contamination. Upon completion of the irrigation well, a water sample must be drawn from a point of use, with results submitted to the Board prior to occupancy. The Board of Health shall only accept zero (0) coliform colonies per 100 ml as acceptable evidence of usability.

Testing for parameters (such as volatile organic compounds (VOCs), pesticides, polychlorinated biphenyls (PCBs), perchlorates, and other inorganics (metals)), can be added or deleted as public knowledge increases, or at the request of the Board of Health or its agent when conditions indicate the need (e.g., prior land use) for such testing.

AREA OF SPECIAL CONCERN; IRRIGATION ONLY WELLS

The Board shall establish an “AREA OF SPECIAL CONCERN” in any location where groundwater has been demonstrated to be contaminated above drinking water standards as a result of a release of oil or hazardous materials either directly to groundwater, or to the surface or subsurface, resulting in migration to groundwater. The Board shall designate an area an “AREA OF SPECIAL CONCERN” after structures in the area affected by groundwater contamination have been connected to the public water system operated by the Town of Westford Water Department or to another public water system. After a structure has been connected to a public water system, all potable water wells located on the property must be disconnected from the structure, and must be abandoned unless the owner of the property applies for an “AREA OF SPECIAL CONCERN PERMIT” from the Board to operate the well as an IRRIGATION ONLY WELL.

A. Designation of “AREA OF SPECIAL CONCERN”

The Board shall designate as part of the “AREA OF SPECIAL CONCERN” all areas in the Town of Westford where groundwater contamination as a result of release of oil or hazardous material into groundwater has resulted in inclusion of the source of the release (“SITE”) as a Disposal Site pursuant to the Massachusetts Contingency Plan (MCP) (310 CMR 40.000) and where the Response Action Outcome (RAO) required to close out the Site includes connection of structures to the Town of Westford Public Water System or to another public water system (non-transient community system) operated pursuant to the Massachusetts Drinking Water Regulations (310 CMR 22.00).

In situations where there is evidence that continued use of groundwater may result in an actual or potential risk of harm to human health, human welfare, or the environment, the Board may, at its discretion, designate an area as an “AREA OF SPECIAL CONCERN” as soon as structures affected by the contaminated groundwater have been connected to a public water system, and prior to the filing of an RAO.

The Board shall maintain a list of properties within “AREAS OF SPECIAL CONCERN” and shall notify property owners via certified mail if their property lies within a designated district. The Board may add areas to this designation, and may remove areas if conditions that warranted the initial designation change.

B. Requirements in an “AREA OF SPECIAL CONCERN”

No landowner may install or use a potable water well in an “AREA OF SPECIAL CONCERN”. When an RAO is filed within the Town of Westford to close out a Disposal Site, the Licensed Site Professional (LSP) who files the RAO must provide the Board with written documentation that each potable water well on property that has been provided with access to water from a public water system has been disconnected from the dwelling or structure, there are no connections or cross-connections to any public water system, and that the well has been abandoned and decommissioned unless the landowner applies for a “AREA OF SPECIAL CONCERN PERMIT” to maintain the well as an irrigation-only well. The LSP must provide

separate notification in a letter or memorandum for each structure that has been connected to a public water system. A copy shall also be provided to the property owner.

C. Special Permit to Operate an Existing Well as an Irrigation-Only Well landowner in “AREA OF SPECIAL CONCERN” may petition the Board to maintain a well as an irrigation-only well. An application for a Special Permit to Operate an Irrigation-Only Well will include the following:

1. Copy of all analytical data from the well. Property owners can obtain this information from the LSP if they do not have copies.
2. Copy of certification provided by the LSP that the well has been disconnected from the structure and that there are no connections or cross-connections with any public water system.
3. If it has been more than one year since the last water quality sample was collected from the well, the Board may, at its discretion, require that a water sample collected from the well and analyzed for the contaminant(s) that was(were) responsible for the designation as a Disposal Site. If so required by the Board, the applicant shall communicate with the Board prior to having the sample analyzed to ensure that the correct analysis will be performed. Samples must be collected in accordance with the requirements in Section V of these Regulations. Sampling and analysis, if so required by the Board, are the responsibility of the applicant.
4. An application fee, as stipulated in the Board’s Schedule of fees, is required.

D. Special Permit to Install an Irrigation-Only Well

Landowner in an “AREA OF SPECIAL CONCERN” may petition the Board to install a well for irrigation only if there is no existing well or the well has been decommissioned.

An application for a Special Permit to Install and Operate an Irrigation-Only well will include the following:

1. Groundwater analytical data from the decommissioned well or from monitoring wells on the property, as well as any other groundwater data from wells near the property.
2. Copy of any certification of well abandonment from the LSP who filed the RAO.
3. If required, a new water sample analyzed for contaminants stipulated by the Board.
4. An application fee, as stipulated in the Board’s Schedule of fees, is required.

E. Review of Applications

Upon receipt of applications for irrigation wells in an “AREA OF SPECIAL CONCERN”, the Board shall review the applications and other available information and data at its disposal to ensure that use of a well in that location will not result in further migration of contaminated groundwater and risk of harm to human health, human welfare, or the environment.

In the case of an application to operate an existing well, the Board may, at its discretion, require the applicant to demonstrate that continued pumping of the well for irrigation use will not result

in migration of contaminated groundwater. This demonstration may require documentation provided by a groundwater hydrologist, civil or environmental engineer, or LSP to be hired by the applicant.

In the case of an application to install a well, the Board may, at its discretion, require at a minimum that the applicant, at his/her expense, hire a consultant to install one or more monitoring wells on the property for the purpose of obtaining groundwater quality data and that the wells be maintained as observation wells until the application is reviewed and the Board has approved or denied the Special Permit

The Board shall vote to approve or deny an application for a Special Permit to Operate an Irrigation Only Well based on information provided.

F. Operation of Irrigation-Only Wells in AREAS OF SPECIAL CONCERN

The following conditions apply to operation of an Irrigation-Only Well in an "AREA OF SPECIAL CONCERN":

1. Irrigation-only wells must be connected to sprinkler systems or to a separate spigot at the wellhead. Sillcock spigots on the house are not permitted.
2. Operators of irrigation-only wells must, (if required by the Board), collect a sample for analysis and provide the results of the analysis to the Board. The Board may, at its discretion, require testing of irrigation-only wells if there is evidence of or threat of potential migration of contamination in a Special Aquifer District, or if such a request is made by the Massachusetts Department of Environmental Protection. The Board will stipulate what analyses must be performed and the schedule for analysis as part of the permit conditions. Samples must be collected in accordance with the requirements of Section V of these regulations, and the permit holder bears all costs associated with the analysis.
3. Operators of irrigation-only wells must comply with any other requirements of the Board.
4. Operators of irrigation-only wells must comply with orders from the Board to cease operation of the well and/or to abandon and decommission the well if there is evidence that continued use of the well is causing migration of contaminated groundwater or presents a risk of harm to human health, human welfare, or the environment.
5. Special Permits to operate irrigation-only wells are issued to the owner of the property where the well will be used, and they terminate with sale or transfer of the property. A new owner must apply for a new permit. If conditions under which the well is operated have not changed, the Board may, at its discretion, waive a requirement that the new property owner pay an application fee.
6. Operators of irrigation-only wells who do not submit water quality results as required, or who fail to comply with other permit conditions established by the Board shall have their permit invalidated, and will have to reapply via the application process.

G. Notice to Maintain “AREA OF SPECIAL CONCERN” Requirements

The Board of Health of the Town of Westford shall maintain the special permit requirements for the “AREA OF SPECIAL CONCERN” in order to protect public health, public welfare, and the environment pursuant to the Massachusetts Contingency Plan (310 CMR 40.0000). In the event that Section VIII of these Regulations, in whole or in part, is amended, the Board shall ensure that the amendments comply with the MCP. If Section VIII of these Regulations is deleted or substantially changed, the Board shall notify the LSP who filed the RAO.

CROSS-CONNECTION PROTECTION

To prevent cross-connections of potable and non-potable water supplies, no building shall be served in any capacity by both a private well and the Town of Westford’s public water system or a community water system unless the two water systems are completely separate. In addition to such complete separation, a backflow protection device approved by the plumbing inspector and the public water supplier must be installed in the building to prevent backflow and cross-connections with the town’s or another public water supply. Any and all of these above conditions must be confirmed by the Town’s plumbing inspector, even if a plumbing permit is not required to perform the work.

GROUND SOURCE HEAT PUMP WELLS

Ground Source Heat Pump Wells installed and operated in the Town of Westford must comply with all regulations of the Mass DEP as set forth in the “Guidelines for Ground Source Heat Pump Wells” (Bureau of Resource Protection, January 2012) as revised or amended from time to time. Installers of Ground Source Heat Pump Wells must comply with all State and Federal Regulations applicable to the well being installed, as stipulated in the Mass DEP Guidelines and including but not limited to requirements with respect to reinjection of return water, fluids used in the system, and testing requirements. If a Ground Source Heat Pump Well will also be used for potable water, it must comply with all potable water requirements of the Town of Westford in addition to the sampling and analysis requirements set forth by Mass DEP. All Ground Source Heat Pump Wells installed in the Town of Westford must also be tested for perchlorates within the Perchlorate monitoring area. All Open-Loop Ground Source Heat Pump Wells shall be tested for the parameters listed in Tables 1 and 2 of the Mass DEP Guidelines and perchlorates within the Perchlorate monitoring area. A copy of the laboratory report shall be provided to the Board of Health while it is provided to Mass DEP.

DRY WELLS & UNDERGROUND INJECTION CONTROL

All dry wells in the Town of Westford shall comply with regulations set forth by the Mass DEP in 310 CMR 27.03(5). Dry wells shall be used for subsurface discharge only of rainwater or storm water collected from roofs, foundation wells, sumps, or other areas. They shall not be used for disposal of graywater from any domestic sources, including but not limited to sinks, washing machines, or dishwashers.

All dry wells shall comply with the following minimum setback distances consistent with Mass DEP guidance:

Property line	10 feet
In ground swimming pool or foundation drain	20 feet
Building foundation, including slabs	10 feet
Water Supply line	10 feet
Surface water	50 feet
Bordering Vegetated Wetlands (BVS)	50 feet
Certified Vernal Pools	100 feet
Private Water Supply Well or suction line	100 feet
Irrigation or other non-drinking water well	25 feet

Dry wells shall also be set back a minimum of 25 feet from septic tanks, leaching fields, and any other component of an underground wastewater disposal system, or from any other subsurface drainage structures. The Board may require a greater setback distance if determined to be necessary for the proper functioning of the septic system or drainage structure.

Dry wells shall not be located within the Zone 1 of any public water system and must meet all requirements of an Activity and Use Limitation or any deed restriction.

CONSTRUCTION, PERMITS, INSPECTIONS, & CERTIFICATES

There shall be a separate water system for each building except for buildings served by a community water system. No such system shall be installed or substantially altered until a permit has been issued by the Board. Irrigation wells require the same permitting process as potable water wells. “Substantially altered” does not include the replacement or repair of existing WATER SYSTEM components with replacement parts of the same quality, size, or materials, but shall include the replacement or repair of existing WATER SYSTEM components with components of a different quality, size, or materials. Each permit shall describe the installation or substantial alteration to be made. Emergency work or overhaul repairs or service of existing equipment not amounting to substantial alteration may be done without a permit. The permit fee for installation of such WATER SYSTEM is as stipulated in the Board’s Schedule of fees.

The water pipe and wire from the house to the well pit or pit less adapter shall be enclosed in a 4-inch pipe, or bedded and backfilled with sand or other native soils that are free from stones or other unsuitable materials. The water pipe shall be copper, not lighter than Type L, or 160 psi semi-rigid plastic pipe, or some other approved equivalent as approved by the Board or its agent. The water pipe shall be installed in a trench excavated to a uniform minimum depth of 5 feet below the finished grade. If the grade is to be lowered at a later date, the installer shall make an allowance for this. If the water pipe cannot be installed at the 5-foot depth because of ledge, boulders, etc. it shall be insulated or sleeved upon the recommendations of the Board or its agent.

A submersible pump may be hung on a nontoxic semi-rigid plastic pipe of 160 psi minimum strength up to a depth of 200 feet. Over 200 feet a submersible pump must be hung on

galvanized pipe, or schedule 80 rigid plastic pipe or its equivalent, as approved by the Board or its agent.

Pump houses, pumps or pipe and wells shall be designed and constructed so as to prevent flooding and otherwise to prevent the entrance of pollution or contamination.

All water systems must comply with all local and state plumbing codes to supply potable water to all buildings and dwellings to be served by the system.

Permitting

Licensed installers, or the owner, shall pay the required fee and apply for a permit before starting work. Failure to pay the fee will result in a double fee and may also result in a fine for violations of this regulation. All reports must be completed and returned to the Department after completion of the job within 30 days. The Westford Building Department shall not issue an occupancy permit if the completed permit is not returned to the Department.

Inspection

Upon installation of the water pipe in the trench, the water pipe shall be properly bedded. The installer shall notify the Department that the trench is completed, however; the Department reserves the right to inspect any trench and water pipe at any time. Responsibility of proper installation in accordance with these regulations rests with the installer. Installations that do not conform to these regulations shall be corrected immediately.

Certificate

A well certificate will be issued upon the completion of the following:

1. A Well Permit pulled and approved
2. A Water System/Pump Permit approved
3. A well drillers report submitted with GPS co-ordinates.
4. A Water quality report from an approved lab.
5. The latitude and longitude of the well (expressed in Massachusetts State Plane NAD83 format)

The Board or its agent may require inspection of the work during its progress, including, among other things, the adequacy of the required seal, the pump test, and shall designate the notice required to be given to the Board or its agent that said work is ready for inspection.

CERTIFICATE OF OCCUPANCY

No Certificate of Occupancy can be issued until all the provisions of these regulations have been met. The required permits and inspections and the provisions of these regulations cannot be construed as a guarantee by the Town of Westford, the Board of Health, or its agent that the WATER SYSTEM will function satisfactorily.

DECOMMISSIONING A WELL

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

The owner of a private well shall decommission the well if any of the following criteria are met:

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

The property owner shall ensure that that all abandoned wells and test holes or borings associated with the well installation are properly plugged before work at the site is completed. Only certified well drillers may plug abandoned wells, test holes, and borings.

Abandoned overburden wells or borings shall be completely filled with a low permeability grout, which cures with a final permeability of less than 1×10^{-7} cm/sec. Wells shall be plugged with neat cement grout, sand cement grout, concrete, or bentonite grout.

Regardless of the type used, the grout used for plugging shall:

1. Be sufficiently fluid so that it can be applied through a tremie pipe from the bottom of the well upward.
2. Remain as a homogeneous fluid when applied to the subsurface rather than disaggregating by gravity into a two-phase substance
3. Be resistant to chemical or physical deterioration
4. Not leach chemicals, either organic or inorganic, that will affect the quality of the groundwater where it is applied

The plugging materials shall be introduced at the bottom of the well or boring and placed progressively upward to a level approximately four (4) feet below the ground surface. Sealing materials shall not be poured from the land surface into the well, borehole, or annular space being sealed.

The well driller shall install a surface seal after the well or boring has been plugged. Before the surface seal is placed, casing remaining in the hole shall be cut off. The remaining four (4) feet at the top of the well or boring shall then be filled with concrete. The top of the seal shall comprise a concrete slab above the top of the plugged well or boring. This concrete slab shall be

at least six (6) inches thick and shall be at least two (2) feet greater in diameter than the well casing or borehole wall.

ENFORCEMENT: VIOLATIONS & PENALTIES

The Board shall have the authority to enforce this regulation and permits issued thereunder by enforcement orders and civil and criminal court actions, and in accordance with the Departments fine policy.

Upon request of the Board or its agent, Town Counsel shall take legal action on behalf of the Board, asking the Court order compliance with the Regulations of the Board of Health and to pay any and all fines accruing as a result of such violations. Upon request of the Board, the Chief of Police shall take legal action for enforcement under criminal law.

Municipal board and officers, including any police officer or other officer having police power, shall have authority to assist the Board in enforcement.

In accordance with Mass. General Laws, c.111, s.31, any person who violates any provisions of these regulations, including altering or removing any deed restriction or covenant without the written consent of the Board, or permit issued pursuant to these regulations may be punished by a fine of not more than three hundred dollars (\$300.00). Each day or portion thereof during which a violation continues shall constitute a separate offense, and each provision of these regulations or permit violated shall constitute a separate offense. Any person who operates a potable water well or irrigation well without a Permit in an "AREA OF SPECIAL CONCERN" may be punished by a fine of not more than three hundred dollars (\$300.00) for each day that the well is operated. Upon request of the Board, owners of properties with irrigation-only wells or potable water wells that are served by the Town of Westford Public Water System or a community water system must demonstrate that they have backflow prevention devices installed to the satisfaction of the Town Plumbing Inspector. Failure to comply may be punished by a fine of not more than three hundred dollars (\$300) for each day that the well is operated. As an alternative to criminal prosecution, the Board may elect to utilize the noncriminal disposition procedure set forth in Mass. General Laws, c.40, s. 21D

VARIANCE

The Board may, grant a variance to any provision of this regulation when, in its opinion, the enforcement would result in manifest injustice, and the applicant has demonstrated that the equivalent degree of protection will be provided without strict application of the particular provision(s) sought to be varied.

Every request for a variance shall be in writing shall state the specific provision of this regulation from which variance is sought, the reasons for seeking the variance and proof of the notice required below. The request shall also contain the information to establish manifest injustice and equivalent degree of protection. At least ten (10) days prior submission of the application to the Board, the applicant shall provide notice of their intent to the request a variance as follows: a) by certified mail, return receipt requested to all abutters of the property upon which the private well

will be or is located and b) publication in a newspaper of general circulation in the town or city in which the private well will be or is located. The notice shall include at a minimum: the name and address of the applicant, a statement of the provision(s) of this regulation from which a variance is sought, and the reason for seeking the variance. Any grant or denial of a variance shall be in writing and shall contain a brief statement of the reasons for approving or denying the variance. A copy of each variance shall be conspicuously posted for thirty (30) days following its issuance and shall be available to the public at all reasonable hours in the Office of the Town Clerk or Office of the Board of Health. No work shall be done under any variance until thirty (30) days elapse from its issuance, unless the Board certifies in writing that an emergency exists.

The Board may issue a variance subject to such conditions as it deems necessary to public health, safety, welfare or the environment. Any such conditions shall be stated in writing in the Board's grant of the variance. The Board may revoke, modify or suspend, in whole or in part, a variance after the property owner has been notified in writing and is afforded an opportunity to be heard, pursuant to these regulations.

RIGHT TO A HEARING

Any person to whom the Board issues an Order may request a hearing before the Board by filing with the Board within seven (7) days after the day the Order was served a written request for a hearing. Upon receipt of a hearing request, the Board shall set a time and place for the hearing and shall inform the well owner in writing. The hearing shall commence within thirty (30) days from the day on which the written request was made, unless a later time is agreed to in writing by the Board and the person requesting the hearing. At the hearing the person requesting the hearing shall be given an opportunity to be heard and show why the Order should be modified or withdrawn. After the close of the hearing, the Board shall issue a written decision to sustain, modify, or withdraw the Order and shall mail a copy of the decision, by certified mail, return receipt requested, to the person who requested the hearing. 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.

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

If a request for a hearing is not filed with the Board within seven (7) days after the day an Order has been served or if after a hearing, the Order has been sustained in whole or any part, each day's failure to comply with the order as issued or sustained shall constitute a separate violation.

SEVERABILITY:

If any provision of these regulations 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 these regulations shall remain valid and effective. Any part of these regulations subsequently invalidated by a new state law or modification of an existing state law shall automatically be brought into conformity with the new or amended law and shall be deemed to be effective

immediately, without recourse to a public hearing and the customary procedures for amendment or repeal of such regulation.

EFFECTIVE DATE

These regulations were amended and adopted by vote of the Westford, Board of Health, at their regularly scheduled meeting held on January 14, 2019 and are to be in full force and effect on and after January 14, 2019. Before said date, these regulations shall be published, and a copy placed on file in the Board of Health Offices

DISCLAIMER

The issuance of a well permit shall not be construed as a guarantee or certification by the Board or its agents that the water system will function satisfactorily or that the water supply will be of sufficient quality or quantity for its intended use.