TOWN OF MEDWAY
COMMONWEALTH OF MASSACHUSETTS

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BOARD OF HEALTH

Medway Board of Health
Rules and Regulations for Private Wells

I. PURPOSE

The purpose of this Regulation is to provide for the protection of the public health, safety, welfare and the environment by, among other things, requiring the proper siting, constructing and testing of private wells.

II. AUTHORITY

These Regulations are adopted by the Medway Board of Health (the "Board"), pursuant to its authority under Massachusetts General Laws, Chapter 111, section 31. These Regulations supersede all previous Regulations for Private Wells adopted by the Board.

III. DEFINITIONS

Abandoned Water Well: A well that meets any of the following criteria; (1) construction was terminated prior to completion of the well, (2) the well owner has notified the Board that use of the well has been permanently discontinued, (3) the well has been out of service for at least three 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 (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.

Agent: Any person designated and authorized by the Board to implement, in whole or part, these Regulations. To the extent provided by the Board, the agent shall have all the authority of the Board and shall be directly responsible to the Board and under its direction and control.

Alter a Well or Well Alteration: Change the structural or hydraulic characteristics of a well including but not limited to deepening, decommissioning, performing Well Yield Enhancement, or performing casing extension, replacement, perforation or repair.

Applicant: Any person who applies to construct a private well.

Aquifer: A water bearing geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian Aquifer: An aquifer that is bound above and below by impermeable material or materials of distinctly lower permeability than the aquifer itself. The water in an aquifer confined in this manner will rise in a drilled hole or well casing above the point of initial penetration (above the bottom of the confining, or impermeable, layer overlaying the aquifer).

Bentonite: A mixture of swelling clay minerals containing at least eighty-five percent of mineral montmorillonite (predominantly sodium montmorillonite) which meets the specifications of the most recent revision of API Standard 13A.

Bentonite Grout: A mixture of bentonite (API Standard 13A) and water in a ratio of not less than one (1) pound of bentonite per one (1) gallon of water.

Board: The Board of Health of Medway, Massachusetts or its authorized agent.

Business of Well Drilling: A person who charges a fee for digging or drilling a well, or any person who advertises, for hire, to dig or drill wells within the Commonwealth of Massachusetts.

Casing: An impervious durable pipe placed in a boring to prevent the walls from caving and to serve as a vertical conduit for water, other fluids, or gases in a well.

Certified Laboratory: A laboratory certified by the Department for the analysis of drinking water and required water quality analytes. Provisional certification is acceptable.

Certified Company: A person authorized by nontransferable Certification with the Department, under 310 CMR 46.00, to engage in the business of Well Drilling and Alteration, determining Well Yield and Pump Installation.

Certified Individual: An individual authorized by nontransferable Certification with the Department to Drill or Alter Wells, as specified in 310 CMR 46.03(1).

Concrete: A mixture consisting of Portland cement (ASTM Standard C150, type I or API Standard 10, Class A), sand, gravel, and water in a proportion of not more than five (5) parts of sand plus gravel to one (1) part cement, by volume, and not more than six (6) gallons of water. One (1) part cement, two (2) parts sand, and three (3) parts gravel are commonly used with up to six (6) gallons of water.

Department: Massachusetts Department of Environmental Protection.

Drinking Water: Water used for human consumption.

Dwelling: A building or portion thereof designed exclusively for residential occupancy, including single family, two family/duplex and multi-family dwellings, but not including hotels, motels, boarding houses, trailers, or structures solely for transient or overnight occupancy.

Install a Pump or Pump Installation: Install, replace, or alter a pump or any component thereof for a well.

Irrigation Well: A Well used for the sole purpose of watering or irrigation. The Well shall not be connected at any time to a Dwelling or a building unless it meets the requirements of a Private Drinking Water Well and has the Board's written approval.

Monitor Well: A Well used to measure or monitor the level, quality, quantity, or movement of subsurface water.

Neat Cement Grout: A mixture consisting of one (1) bag (94 pounds) of Portland cement (ASTM Standard C 150, Type I or API Standard 10, Class A) to not more than six (6) gallons of clean water. Bentonite (API

Standard 13A), up to two (2) percent by weight of cement, shall be added to reduce shrinkage. Other additives, as described in ASTM Standard C494, may be used to increase fluidity and/or control setting time.

Person: any agency or political subdivision of the federal government or the commonwealth, any state, public or private corporation or authority, individual, trust, firm, joint stock company, partnership, association, or other entity, and any officer, employee or agent of said person, and any group of said persons.

Private Drinking Water Well: Any Private Well that is used for the purpose of supplying water used for human consumption.

Private Well: Any hole or shaft drilled into the ground to inject or withdraw water, other fluids, or gases, monitor soil gases, monitor groundwater levels or water quality, transfer heat, or provide cathodic protection that is not regulated as a public water supply under 310 CMR 22.00.

Private Well Yield: The gallons per minute (gpm) of water that can flow or be withdrawn from a well, at a sustained rate after a minimum of two (2) hours if the water level has stabilized (water level does not fluctuate more than three (3) inches) for the last 30 minutes of the test.

Pumping (Aquifer) Test: A procedure used to determine the characteristics of a well and adjacent aquifer by installing and operating a pump.

Pump or Pump System: The mechanical equipment or devices used to remove water from a well. For a well with a pitless adapter, the pump system includes all piping and the pitless adapter. For a well with a submersible pump and without a pitless adapter, the pump system includes all piping up to the metering device, or if none, then up to the main control valve inside the foundation of the structure served by the well. For a well without a submersible pump and without a pitless adapter, the pump system includes all piping up to and including the wellhead. For installation or repair purposes, the pump or pump system includes all piping up to the metering device or, if none, then up to the main control valve inside the foundation of the structure served by the well.

Replace a Pump or Pump Replacement: Installation of a Pump of the same horsepower as the Pump that was last removed and/or installation of any component of a Pump with a component of the same size and capacity as the one that was last removed. Also, removal and replacement of a Pump or any component thereof.

Sand Cement Grout: A mixture consisting of Portland cement (ASTM Standard C150, Type I or API Standard 10, Class A), sand, and water in the proportion of one (1) part cement to three (3) or four (4) parts sand, by volume, and not more than six (6) gallons of water per bag (94 pounds) of cement. Up to five (5) percent, by weight of bentonite (API Standard 13A) shall be added to reduce shrinkage.

Static Water Level: The distance from established ground surface to the stabilized water level in a well which is neither being pumped nor under the influence of pumping.

Structure: A combination of materials assembled at a fixed location to give support or shelter, such as a building, framework, retaining wall, fence, or the like.

Water Used for Human Consumption: Water that is used for drinking, bathing, showering, cooking, dishwashing, or maintaining oral hygiene.

Well: Any hole or shaft drilled into the ground to inject or withdraw water, other fluids, or gases, monitor soil gases, monitor groundwater levels or water quality, transfer heat, or provide cathodic protection.

Wellhead: The above-ground component or structure built over a well.

Well Yield Enhancement: A process to increase the production of water and yield by using water under pressure, or another substance the Department has approved for use in the process, to clean out existing fractures to allow water to flow into the well from other areas.

IV. WELL CONSTRUCTION PERMIT

(1) A Certified Company or Individual (the "Driller") shall obtain a Well Construction Permit (the "Permit") from the Board prior to the commencement of construction of a Private Well. Monitoring Wells do not require a permit from the Board. The Board shall deny a Permit to any Driller who has not met all the requirements of the form/application, this Regulation or State Regulations. No work shall be commenced prior to having a signed Permit in hand and providing the Board with 24 hours' prior notice.

(2) Each Permit application to construct a Well shall include the following:

(a) The property owner's name and address.
(b) The Driller's name and proof of valid Massachusetts certification/license.
(c) A plan with a specified scale, signed by a registered surveyor or engineer, showing the location of the proposed Well in relation to existing or proposed above or below ground structures. The plan shall include the following:

1. dimensions to the proposed Well from property lines;
2. sewer pipes and septic system components within 200 feet;
3. drains, easements, wetlands within 100 feet;
4. 100-year flood evaluation for flood zones within 100 feet; and
5. for a lot that will be served by an on-site septic system, the plan required shall be the septic system plan with the proposed location of the Well shown, all of the above requirements met, and all septic systems within 200 ft of the proposed Well shown.

(d) A description of prior and current land uses within two hundred (200) feet of the proposed Well location, which represent a potential source of contamination, including but not limited to the following:

1. existing and proposed structures;
2. subsurface sewage disposal systems;
3. subsurface fuel storage tanks;
4. public and private ways;
5. utility rights-of-way; and
6. any other potential sources of pollution.

(e) a Permit fee as found on the Board's fee schedule.

(3) The Permit shall be on-site at all times that work is taking place. Each Permit shall expire one (1) year from the date of issuance unless revoked for cause or extended. Permits may be extended for one additional six (6) month period provided that a written explanation for the request is received by the Board prior to the one-year expiration date.

(4) Permits are transferable within one year of initial application and upon appropriate written notice from the new Driller.

(5) No Permit will be issued until the Board has approved the septic system plan, if applicable.

V. WELL LOCATION AND USE REQUIREMENTS

(1) In locating a Well, the Applicant shall identify on a plan all potential sources of contamination, which exist or are proposed within two hundred (200) feet of the site. When possible, the Well shall be located upgradient of all potential sources of contamination and shall be as far away from potential sources of contamination as possible, given the layout of the property.

(2) No Well used for Drinking Water shall be constructed unless it meets the following setback requirements:

(a) 15 feet from property line
(b) 25 feet from public or private roadway
(c) 15 feet from right of way
(d) 100 feet from soil absorption area of an on-site subsurface disposal system
(e) For new developments only: 125 feet from soil absorption area of an on-site subsurface disposal system located up gradient from the Well
(f) 50 feet from any part (other than soil absorption area reference above) of an on-site subsurface sewage disposal system
(g) 100 feet from stable/barnyard/manure storage
(h) 100 feet from an underground fuel storage or pesticide tank
(i) 25 feet from any surface water, including, but not limited to, wetlands
(j) 5 feet from any building or projections thereof

(3) No Irrigation Well shall be constructed unless it meets the following setback requirements:
(a) 15 feet from property line
(b) 25 feet from public or private roadway
(c) 15 feet from right of way
(d) 25 feet from soil absorption area of an on-site subsurface disposal system
(e) 10 feet from any part (other than soil absorption area reference above) of an on-site subsurface sewage disposal system

(4) The Board reserves the right to impose minimum setback requirements from other potential sources of contamination not listed above. All such additional setback requirements shall be listed, in writing, as a condition of the Permit.

(5) Each Private Well shall be located so that it is accessible for repair, maintenance, testing, and inspection. The Well shall be completed in a water bearing formation that will produce the required volume of water under normal operating conditions.

(6) Water supply lines shall be installed at least ten (10) feet from and eighteen (18) inches above any sewer line. When water supply lines must cross sewer lines, both lines shall be constructed of Class 150 pressure pipe and shall be pressure tested to assure watertightness.

(7) No Private Well, or its associated distribution system, shall be connected to either the distribution system of a public water supply system or any type of waste distribution system.

(8) There shall be a separate private Drinking Water Well for each Dwelling. The Well serving that Dwelling shall be located within the lot boundaries of the building site. No Well shall be used to supply more than one Dwelling. For non-residential Wells, the Board shall determine the number of Wells required for the specific building site.

VI. WATER QUANTITY REQUIREMENTS

(1) There shall be a minimum safe yield of 200 gallons per bedroom per day at 20 pounds per square inch residual pressure as measured at the highest fixture serviced by the well. A bedroom includes any undeveloped area that could be made into a bedroom.

(2) All demands for water shall be provided from storage in a pressure tank. Pressure tanks for individual home installation shall be a diagram type and have a minimum capacity of 36 gallons.

(3) A log of the Well, showing depth and type of overburden, depth of Casing installed below the surface grade, diameter of Casing, diameter of hole in the rock, Static Water Level, and pump rate which can be sustained for at least four (4) hours at constant drawndown depth shall be included with the application for Permit compliance. The following minimum guidelines shall be applied:

(a) A Pump Test shall be made with the faucet open to waste for a four (4) hour constant pumping period using a pump capable of producing ten (10) gallons per minute ("GPM") or more.

(b) In the event the Well is exhausted during the initial four (4) hour pump testing period, the faucet shall be so regulated after suitable well recovery (of not more than thirty (30) minutes) in order to allow pumping at a constant rate for an additional four hours at a constant depth to determine the yield.

(c) A sustained pumping rate of two (2) GPM for a four hour period shall be the rate as presented in subsection (f) below.

(d) The Well (after the pumping test) shall recover to within 85 percent of the original Static Water Level within a twenty-four hour period.

(e) Testing and evidence to show satisfactory Well yield, recovery, and compliance with these pump testing requirements shall be certified in writing by the Driller and submitted to the Board.

(f) A quantity test shall be performed by competent licensed pump or Well-drilling contractors. The Well shall produce a water supply for an individual Dwelling by an on-site as follows:

Well Drawing Depth	Minimum Well Yield (GPM – 4 hours)
To 100 feet	5
100- 199 feet	4
200- 299 feet	3
300 feet and deeper	2

(g) The results of all testing shall be submitted to the Board for approval. The results shall be submitted on the Department Well Completion Report as required by 310 CMR 46.03 and the Well contractor shall be fully responsible for all data submitted.

VII. WATER QUALITY TESTING REQUIREMENTS

(1) After the construction of the Well has been completed and disinfected, and prior to using it as a private Drinking Water Well, baseline water quality testing shall be conducted.

(2) A water sample shall be collected either after purging three (3) Well volumes or following the stabilization of the pH, temperature and specific conductance in the pumped Well. The water

sample to be tested shall be collected at the pump discharge or from a disinfected tap in the pump discharge line. In no event shall a water treatment device be installed prior to sampling.

(3) Water quality testing of the private drinking water well, utilizing the applicable US EPA approved method for public drinking water testing, shall be conducted by a Massachusetts or EPA certified laboratory and shall include analyses for the following parameters:

- Alkalinity
- Arsenic
- Calcium
- Chloride
- Chlorine
- Color
- Copper
- Fluoride
- Hardness
- Iron
- Lead
- Manganese
- pH
- Sodium
- Total Coliform bacteria
- E. coli bacteria
- Nitrate
- Nitrite
- Nitrogen Ammonia
- Odor
- Potassium
- Sediment
- Sulfate
- TDS
- Turbidity
- Volatile organic compounds (per EPA 524.2)

The Board may require more frequent testing, or testing for additional parameters, where other water quality problems are known or suspected to exist.

(4) In Wells drilled into bedrock in addition to the parameters listed above, a Gross Alpha Screen and Radon test shall be performed. If the Gross Alpha screen detects radiation of 15 pCi/L or more, then the water must be analyzed for Radium and Uranium concentrations. If the Gross Alpha screen detects radiation of 5 pCi/L or more, then the water must be analyzed for Radium 226 and Radium 228.

(5) Testing for water quality parameters not listed in VIII.(3) and (4) for which there is a US EPA or Department approved method for public Drinking Water testing, shall be conducted by a Department or EPA certified laboratory or any other certification authority approved by the Department.

(6) The owner of every well used for drinking water including those serving a property which is rented or leased shall have its water tested at a Certified Laboratory for the following chemical and bacteriological parameters at a minimum of once a year: Total Coliform Bacteria, E. Coli bacteria, Nitrate, Nitrite, pH, Conductivity, Sodium, and Iron. All other required chemical parameters listed in VII.(3) should be tested at a minimum of every ten (10) years. Wells installed in bedrock Aquifers should also be tested at a minimum of every ten (10) years for the radiological parameters described in VII.(4). The Board may require more frequent testing, or testing for additional parameters, where other water quality problems are known or suspected to exist.

(7) The owner of a rental property shall make results of all water quality tests available to all tenants of the property and the Board. In cases where the Well water does not meet the water quality standards outlined above, the Board may require the property owner to provide an alternative approved source of Drinking Water for the tenants.

(8) Prior to selling, conveying, or transferring title to real property, the owner shall have tested the water of every private Drinking Water Well serving that property. A water sample from each Well shall be submitted to a Certified Laboratory for testing for the parameters listed in the Water Quality section of this document. This water quality testing shall have been performed not more than one (1) year prior to transfer of the property. Results of the water quality testing shall be submitted to the Board prior to property transfer.

(9) In addition, the owner shall give copies of all available water quality test results of which he/she has knowledge (regardless of age of results) for the private well in question to any buyer and/or broker involved in the transfer. In the event that there is no buyer at the time the water is tested, a copy of all water test results must be given by the owner to the buyer before the property is sold.

(10) For Irrigation Wells, the Board requires annual testing for E. Coli bacteria and Nitrate/Nitrite, as accidental consumption could result in acute exposure.

(11) The Board reserves the right to require retesting 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. All costs and laboratory arrangements for the water testing are the responsibility of the Applicant or property owner.

(12) Following a receipt of the water quality test results, the Well owner shall submit a Water Quality Report to the Board, which includes:
(a) a copy of the Certified Laboratory's test results;
(b) the name and contact information of the individual who performed the sampling; and
(c) where in the system the water sample was obtained.

(13) This Regulation requires that private drinking water wells meet all current Massachusetts' Primary Drinking Water Standards. In any case where a private drinking water well does not meet any current Secondary Drinking Water Standards and Guidelines adopted by the MassDEP Office of Research and Standards (ORS), the Board may take action requiring the property owner to meet such standard as deemed necessary by the Board. Furthermore, in any case where a private Drinking Water Well does not meet such Primary and Secondary standards or Guidelines, as it deems necessary for the protection of public health, safety or welfare, that the Board may take action, but not limited to, requiring the property owner to provide an alternative source of Drinking Water or record the exceedance on the property deed.

VIII. WELL CONSTRUCTION REQUIREMENTS

(1) Pursuant to 310 CMR 46.02 (1), no person in the business of digging or drilling shall construct a Well unless certified by the Department Well Drillers Program.

(2) Any work involving the connection of the Private Well to the distribution system of the residence must conform to the local Plumbing Code. All electrical connections between the Well and the pump controls and all piping between the Well and the storage and/or pressure tank in the house must be made by a pump installer or Driller, including the Installation of the Pump and appurtenance(s) in the Well or house.

(3) A physical connection is not permitted between a water supply, which 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.

(4) General Well Design and Construction

(a) All Private Wells shall be designed and constructed such that:

1. The materials used for the permanent construction are durable in the specific hydrogeologic environment that occurs at the Well site.
2. No unsealed openings are left around the Well that could conduct surface water or contaminated groundwater vertically to the intake portion of the well or transfer water from one formation to another.

(b) Permanent construction materials shall not leach or contribute toxic substances, taste, odors, or bacterial contamination to the water in the Well.

(c) The Driller shall operate all equipment according to generally accepted standards in the industry and shall take appropriate precautions to prevent damage, injury or other loss to persons and property at the drilling site.

(d) Well construction design shall ensure that surface water does not enter the Well through the opening or by seepage through the ground surface. Construction site waste and materials shall be disposed of in such a way as to avoid contamination of the Well, any surface water or the Aquifer. During any time that the Well is unattended, the contractor shall secure the Well in a way as to prevent either tampering with the Well and/or the introduction of foreign material into the Well.

(e) All water used for drilling, Well development, or to mix a drilling fluid shall be obtained from a source, which will not result in contamination of the Well or the water bearing zones penetrated by the Well. Water from wetlands, swamps, ponds and other similar surface features shall not be used.

(f) Water shall be conveyed in clear sanitary containers or water lines and shall be chlorinated to an initial concentration between 50 milligrams per liter (mg/L) and 100 mg/L. All drilling equipment including pumps and downhole tools, shall be cleaned and disinfected prior to drilling each new Well or test hole.

(g) 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 shall be biodegradable. The use of biodegradable organic polymers shall, when possible, be avoided.

(h) All Wells, including those that have been hydrofractured, shall be developed in order to remove fine materials introduced into the pore spaces or fractures during construction. One or more of the following methods shall be used for development: over pumping, backwashing, surging, jetting, air-lift pumping.

(i) The completed Well shall be sufficiently straight so that there will be no interference with installation, alignment, operation or future removal of the permanent Well pump.

(5) Well Casing

(a) Private water supply Wells shall be constructed using either steel or thermoplastic Casing. The Casing shall be of adequate strength and durability to withstand anticipated formation and hydrostatic pressures, the forces imposed on it during installation, and the corrosive effects of the local hydrogeologic environment.

(b) All Casing used in the construction of Private Wells shall be free of pits, breaks, gouges, deep scratches and other defects. If previously used Casing is installed, it shall be decontaminated and disinfected prior to installation.

(c) Installation of water Well Casing shall be done in a manner that does not alter the shape, size, or strength of the Casing and does not damage any of the joints or couplings connecting sections of the Casing. A standard drive shoe shall be used when Casing is installed. The drive shoe shall be either welded or threaded to the lower end of the string of Casing and shall have a beveled metal cutting edge forged, cast, or fabricated for this specific purpose.

(d) Upon completion of the installation procedure, the entire length of the Casing above the intake shall be watertight.

(e) Well casing shall not be cut off below the land surface unless a pitless adapter or a pitless unit is installed or an abandoned well is being permanently plugged. Well casing terminating above-grade shall extend at least twelve (12) inches above the predetermined ground surface at the wellhead except when the well is located in a floodplain. When a well is located in a floodplain, the well casing shall extend at least two (2) feet above the level of the highest recorded flood. The top of the well casing shall be reasonably smooth and level.

(6) Well screen

(a) A Well screen is required for all drilled Wells that are completed in unconsolidated formations. All Well screens shall be of Grade 304 stainless steel. Wells completed in bedrock do not require a screen unless the bedrock formation is brittle in nature or has a potential for collapse. The Well screen aperture openings, screen length, and diameter shall be selected so as not to limit the Aquifer's water yielding characteristics while preventing access of soil particles that would detract from Well efficiency and yield.

(7) Grouting and sealing

(a) Private wells drilled in bedrock shall be grouted from the ground surface or from the bottom of the pitless adapter (if present) to 15 feet into competent bedrock. Neat cement grout, sand cement

grout, or Bentonite grout shall be used. It shall have a permeability of at least 1 x 10-7 and be emplaced using standard grouting techniques as described in the Department Private Well Guidelines, as amended.

(b) All wells completed with the Casing extending above grade shall have a surface seal designed to eliminate the possibility of surface water flowing down the annular space between the Casing and the surrounding backfilled materials. The surface seal shall extend to a depth below the local frost line.

(8) Wellhead completion

(a) All Wells shall be equipped with a sanitary seal or watertight cap designed to prevent surface water and foreign matter from entering the Well.

(b) All Wells except flowing artesian and dug wells shall be vented. The opening of the vent pipe shall be covered with a 24-mesh corrosion resistant screen and shall be large enough to prevent water from being drawn into the well through electrical conduits or leaks in the seal around the pump when the pump is turned on. The vent pipe shall terminate in a downward position at or above the top of the Casing.

(c) All connections to a Casing made below ground shall be protected by either a pitless adapter or a pitless unit that complies with the most recent revision of National Sanitation Foundation Standard Number 56, entitled "Pitless Well Adapters."

(d) Above-grade connections into the top or side of a well casing shall be at least twelve (12) inches above the established ground surface or two (2) feet above the level of the highest known flood, whichever is higher. Above-grade connections shall be sealed so that they are watertight.

(e) The ground immediately surrounding the Casing shall be sloped downward and away from the Well in all directions to eliminate the possibility of surface water ponding.

(9) Disinfection

(a) Upon completion of well construction, the Driller shall disinfect the Well. If a pump is to be installed immediately upon completion of the Well, the pump installer shall disinfect the Well and the pumping equipment after the pump has been installed.

(b) If the pump is not installed upon completion of the Well, the pump installer shall, upon installation, disinfect the Well and the pumping equipment. The pump installer shall also disinfect the entire water supply system immediately after any maintenance or repair work is done on the pump.

(c) When a Well is disinfected, the initial chlorine concentration shall be 100 mg/L throughout the entire water column.

(d) For newly constructed or altered wells in which the pump is not immediately installed, the chlorine concentration used to disinfect the Well shall be 100 mg/L. Upon installation of the pump, the Well, the pumping equipment, and the distribution system, if connected, shall be disinfected with a chlorine concentration of 100 mg/L.

(e) The disinfectant solution shall remain undisturbed in the Well for a minimum of two (2) hours. After all the chlorine has been flushed from the water supply system, a water sample shall be collected and submitted to a Certified Laboratory. For new Wells, the sample shall be tested pursuant to Section VI of these regulations.

(f) Only certified Drillers are authorized to physically alter or repair a Well. For Wells that have undergone repair a sample shall be tested for total coliform bacteria and any other parameters deemed appropriate by the Board, prior to being put back in use.

(10) Prohibitions

(a) The following are prohibited:

1. Surface water for a private water supply;
2. Cisterns and the new construction of dug Wells;
3. Cross connections for whatever purpose shall not be allowed. It is prohibited by 310 CMR 22.22 (2) (j) to have a cross connection between a public water system and a Private Well used for either Drinking Water or irrigation purposes; and
4. Wells used for Drinking Water and domestic water supply that provide water for groundwater heat pump systems, water-cooling, air-conditioning systems, or irrigation. Any well used for such systems shall be approved by the Board only after the applicant has submitted sufficient evidence to the satisfaction of the Board that such use will not disrupt any quality or quantity of water from any Well and that the Well will satisfy the manufacturer's recommendations for proper equipment operation

IX. DECOMMISSIONING REQUIREMENTS

(1) Abandoned Wells, test holes, and borings shall be decommissioned to prevent the Well, including the annular space outside the Casing, from being a channel allowing the vertical movement of water.

(2) The owner of a Private Well shall decommission the well if any of the following criteria are met:

(a) Construction of the Well is terminated prior to completion of the well.
(b) The Well owner notifies the Board that the use of the Well is to be permanently discontinued.
(c) The Well has been out of service for at least three (3) years.
(d) The Well is a potential hazard to public health or safety and the situation cannot be corrected.
(e) The Well is in such a state of disrepair that its continued use is impractical or unsafe.
(f) 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.

(3) 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 Drillers may plug Abandoned Wells, test holes, and borings.

(4) Abandoned overburden Wells or borings shall be completely filled with a low permeability grout, which cures with a final permeability of less than 1x10-7 cm/sec. Wells shall be plugged with neat cement grout, sand cement grout, concrete, or Bentonite grout.

(5) Regardless of the type used, the grout used for plugging shall:

(a) Be sufficiently fluid so that it can be applied through a tremie pipe from the bottom of the Well upward.

(b) Remain as a homogeneous fluid when applied to the subsurface rather than disaggregating by gravity into a two-phase substance.
(c) Be resistant to chemical or physical deterioration.
(d) Not leach chemicals, either organic or inorganic, that will affect the quality of the groundwater where it is applied.

(6) 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.

(7) 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 Casing or borehole wall.

X. ENFORCEMENT

(1) The Board has authority to investigate suspected or known violations of these Regulations and/or violations of any Water Supply Certificate conditions. The Board may take actions, as it deems appropriate, within its authority for the protection of public health, safety welfare, or the environment, and to enforce any of the provisions of this Regulation.

(2) If any investigation reveals a violation of these Regulations, the Board may order the Private Well owner to comply with the violated provision(s), and/or take other action within its authority as the Board deems appropriate.

(3) Any Order the Board issues shall be in writing and served in the following manner:

(a) personally, by any person authorized to serve civil process;
(b) by any person authorized to serve civil process by leaving a copy of the Order at the property owner's address;
(c) by sending the property owner a copy of the Order by registered or certified mail, return receipt requested; or,
(d) by posting a copy of the Order in a conspicuous place on or about the premises and by advertising it for at least three (3) out of five (5) consecutive days in one or more newspapers of general circulation within the municipality where the Private Well is located, if the property owner's last and usual place of residence is unknown or outside the Commonwealth.

XI. HEARING

(1) 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 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.

(2) 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 clerk of the city or town, or in the office of the Board.

(3) 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.

XII. APPEAL

(1) Any person aggrieved by the final Order, Variance, Well Construction Permit, or Certificate of Water Supply determination of the Board may appeal to any court of competent jurisdiction as provided by the laws of the Commonwealth.

XIII. PENALTIES

(1) Any person who violates any provision of these Regulations, or who fails to comply with any final Order of the Board, for which a penalty is not otherwise provided in any of the Massachusetts General Laws, shall upon conviction be fined not less than ten (10) nor more than five hundred (500) dollars. Each day's failure to comply with a final Order or any provision of this regulation shall constitute a separate violation.

(2) Whoever violates any provision of this Regulation and/or any condition in a permit or enforcement action issued by the Board or its agent may be penalized by a noncriminal disposition process as provided in G.L. c. 40, §21D and the Town's non-criminal disposition by-law. If noncriminal disposition is elected, then the non-criminal fine for each such violation, if not otherwise specified, shall be:

First Offense:	Written Warning
Second Offense:	$100
Third:	$200
Fourth and subsequent offense(s):	$300

Each day or portion thereof shall constitute a separate offense. If more than one, each condition shall constitute a separate offense.

(3) The Board or its designee shall be the enforcing authority for violations of this Regulation.

XIV. VARIANCE

(1) 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.

(2) Every request for a variance shall be in writing and 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. 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.

(3) 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 Section XI of these Regulations.

XV. SEVERABILITY

(1) 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.

XVI. DISCLAIMER

(1) 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.
(2) The Board may suspend or revoke any Permit issued under the provisions of this Regulation, wherever the Permit is issued in error or on the basis of incorrect, inaccurate, or incomplete information, or in violation of any bylaw or regulation or any of the provisions of this code.
(3) Notification under this Regulation shall be verbal or written. When verbal, notification must be followed by a written notification within 48 hours. All work must be stopped immediately upon notification unless otherwise allowed by the Board. Any person issued a written notice of suspension or revocation may request within seven (7) days and shall be granted a hearing on the matter before the Board within 30 days after written receipt of the request. Permits shall not be reinstated or reissued until all conditions for which they were revoked or suspended have been corrected in accordance with the specific stipulations of the Board

XVII. EFFECTIVE DATE

These Regulations were adopted by vote the Medway Board of Health at its regularly scheduled meeting held on _____, 2025 and are to be in full force and effect on and after _____, 2025. Before said date, these Regulations shall be published and a copy placed on file in the Board of Health Offices and filed with the Department of Environmental Protection, Division of Wastewater Management in Boston. These Regulations or any portions thereof may be amended, supplemented, or repealed from time to time by the Board, as provided by law and applicable regulations.

Signed this _____ day of _____, 2025

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