



CITY OF GARDNER



OFFICE OF THE
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REGULATION GOVERNING WATER FOR PRIVATE & SEMI-PUBLIC WELLS

The Gardner Board of Health, acting under the provisions of the General Laws, Chapter 111, Section 31, and by any power hereto enabling, and in the interest of and for the preservation of public health, as well as protection of groundwater quality, has adopted the following regulation which superseded all previous regulations pursuant to private wells:

ARTICLE 13

1. **WELL** - The word "well" for the purpose of this regulation shall include any pit, pipe, excavation, spring, casing, drill hole or other source of water to be used for any purpose including but not limited to potable water in the City of Gardner, and shall include dug wells, driven or tubular wells, drilled wells (artesian or otherwise) and springs, gravel-packed, gravel-walled wells, gravel-developed and wash-boring.

2. **PRIVATE WATER SUPPLY** - The term "private water supply" means any water system serving or intended to serve water for human consumption or for domestic uses on one lot. The system shall include all of the sources, treatment works and transmission lines to the point where distribution takes place within the building. Shared wells are considered under semi-public water supply below.

3. **SEMI-PUBLIC WATER SUPPLY** - The term "semi-public water supply" means any 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 homes parks, bottling plants, campgrounds, recreational camps, beaches, and parks.

4. **REPAIR/ALTERATION** - Addition of a disinfecting or other treatment device, deepening, fracturing, replacement or any other change to an existing well.

Well Permit

1. A well permit shall be obtained from the Board of Health prior to the construction, alteration, repair, or destruction of any water well or well system, (except for those wells regulated by the Department of Environmental Protection under Mass. Drinking Water Regulations 310 CMR 22.00 et seq.).

2. Fee Schedule:	Construction	\$50.00
	Repair	\$25.00
	Destruction	\$25.00
	Plan Alteration	\$10.00

3. An application for a water well construction permit shall be submitted to the Board of Health office on forms furnished by the Board. The well contractor is responsible for confirming that said permit has been issued prior to well construction, destruction, alteration or repair.

4. The location, design, and operation of the water well must be approved by the Board of Health office prior to construction. Prior to approval, the Board of Health requires the following information be submitted.

For new well construction, the owner or his agent shall submit a detailed plot plan, drawn by a Massachusetts registered professional engineer, or sanitarian, showing the location of the well in relation to building foundations, property lines, roadways, building sewer lines, wetlands/drainage, the subsurface sanitary disposal systems serving the lot, all other septic systems within 100 feet, and any other potential sources of contamination within 400 feet which could affect the well. Such sources of contamination shall include landfills, auto body shops, auto junk yards and repair facilities, underground storage tanks, wood waste disposal areas, and any other sites, existing or proposed which the Board of Health determines may present a threat to water quality.

In the case of multiple wells on one site (more than one) the Board may require that a hydrogeological study be performed to prevent depletion of ground water within any given aquifer.

The Board may also request additional requirements be met as specific site variations may warrant.

5. The location of the well on the lot must be staked prior to its installation and the staked location approved by the Board of Health.

6. Application for a permit must be made at the Board of Health office no less than three (3) business days prior to the commencement of installation of a private or semi-public well.

7. All well drillers doing business in the City of Gardner must be in possession of a current Massachusetts Well Driller Registration issued to them under MGL Ch. 21 Sec. 16.

8. All permits issued shall expire two years from the date of issue, unless revoked for cause. Permits may be extended for a period not to exceed one additional year upon a written request to the Board prior to expiration. No extension fee will be charged.

9. The permit will be displayed at the well site.

10. The issuance of a Private Well Certificate shall not be construed as a guarantee that the water supply system will function satisfactorily.

Well Location

Setback Distance Requirements:

Property line	10 feet
Roadway/Public or private	25 feet from road layout (not edge of pavement)
Leaching facility/reserve area	100 feet
Septic tank, sewer line	50 feet
Catch basin, dry well	50 feet
Building (including over hang)	10 feet
Wetland/watercourse	50 feet

Where, in the opinion of the Board of Health office, adverse conditions exist, the above distances may be increased. In certain cases, special means of protection may be provided. Where possible, the well shall be up gradient from possible sources of contamination.

The above setback distance may be increased or special means of protection required if the Board believes adverse conditions exist.

Well Construction Standards

Each private well shall be accessible for repair, maintenance, testing and inspection, and unless approved by the Board in advance, for human consumption shall be drilled.

1. Wells, including dug wells, shall be constructed in compliance with the recommendations of the latest edition of the Manual of Individual Water Supply. U.S. Environmental Protection Agency (U.S. EPA), Water Supply Division (exception: surface springs shall not be used for the purpose of a potable water supply). A current Massachusetts Well Drillers Registration shall be held.
2. The annular space, if any, between the protective well casing and the wall of the drilled hole or the surface casing shall be effectively sealed. The seal is to protect against contamination by surface and/or subsurface waters. Casings on wells less than 100 feet from septic systems (leaching areas), wetland, etc. shall be pressure grouted.
3. The well casing shall be covered with a sanitary well seal. Casing shall extend a minimum of 24 inches above the highest known flood levels or 18 inches above the ground surface in areas which are not subject to flooding. In addition, all non-vent openings shall be sealed to exclude the intrusion of contaminants. Vent openings shall be completed with screening.
4. When well screens are used, the screen length and opening size should be selected to ensure that the water supply will be free from silt, sand and other suspended solids. Gravel packed wells should be adequately sealed with a substance such as bentonite, and should be installed above the screen area.
5. Well pumps and water storage equipment shall be selected to ensure that the water supply is adequate. A minimum of five gallons per minute (GPM) for four hours is required. When the pump test is performed, a representative of the Board should be on-site to observe and confirm the flow rate as well as confirm that water is sufficiently clean enough to sample. A minimum of forty-eight hours notice is required to arrange for the pump test to be performed.
6. Pump suction lines, if used, shall not be closer than 100 feet from the underground sewage leaching facilities or 50 feet from a septic tank (310 CMR 15.211).
7. Well pits to house the pumping equipment or to permit access to the top of a well shall not be permitted.
8. All connections to a well 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 56, ventilated "Pitless Well Adapters".

9. Cross connections shall be prohibited. No cross connection between a private well and a public water supply shall be allowed.

10. The construction of injection wells for liquid waste disposal shall be prohibited.

11. A well completion report must be submitted by the driller prior to Board of Health approval of the well for human consumption.

Disinfecting and Other Sanitary Requirements

All private wells shall be disinfected following construction, rehabilitation, and well or pump repair before the well is placed in service. The well shall be pumped to waste (not to the septic system) until the water is as clear as possible. Thereafter, the well and the pumping equipment (and plumbing, if installed) shall be disinfected with a solution containing at least fifty (50) parts per million (ppm) of chlorine. The well shall remain in contact with the chlorine solution for a minimum of 24 hours before the well is pumped to waste (not to the septic system) and the water is found to be free of chlorine.

Water Quality

Water samples taken from the well will be submitted to a testing laboratory certified by D.E.P. for the analysis performed with the cost to be borne by the applicant. Samples can be collected by the applicant, pump installer, laboratory or representative or Board of Health Representative, but samples will be collected in accordance with current professional standards and practices in order to maintain sample integrity. The sample will be taken at the end of the initial 4 hour pump test. However, if at the end of four hours, in the opinion of the sampler, or the Board of Health Representative, the water quality is visually unacceptable, (for example, contains sediment, particulates, turbidity, etc.) the pumping should be continued until the water is clear, before sampling occurs. Water quality will be evaluated by the Board of Health using the most current Massachusetts Primary and Secondary Drinking Water Standards and additional testing may be required by the Board of Health office.

The Board of Health further recommends that well owners have their wells tested at a minimum of every two years, and at more frequent intervals when water quality problems are known to exist. The results should also be forwarded to the Board.

Water Treatment

Both primary and secondary standards must be met and may require a treatment system be installed to accomplish that. Parameters to be tested include the following:

COLIFORM BACTERIA
NITRATE
TURBIDITY
SODIUM
ALKALINITY
CALCIUM
CHLORIDE*
COLOR*
COPPER
HARDNESS*
IRON*
MAGNESIUM*
MANGANESE
NITROGEN AMMONIA*
NITROGEN NITRITE*
ODOR*
pH
POTASSIUM*
SEDIMENT*
SULFATE
TOTAL DISSOLVED SOLIDS
ARSENIC
LEADS

* Parameters not certified for by the state.

** Additional parameters may be requested at the discretion of the Board on know or assumed site conditions.

If treatment is necessary, the system used shall not be backwashed to a subsurface disposal system and would preferably not require the use of salts, since that can raise the sodium levels above the D.E.P. action limit. A water test will be required after the treatment system is installed to confirm that the system is functioning properly.

Yield Test

Every well shall be pump-tested. The test shall include a drawdown test at a minimum rate adequate in supply to accommodate the daily usage needs for the dwelling to be serviced. The representative of the board should be present. A pump test report will be submitted by the pump installer and will be used for approval of the well capacity by the Board.

Rates below 5 g.p.m. for four hours shall not be approved without a special permit issued by the Board of Health. If a well must be fractured to obtain the required flow rate, the well completion report should reflect the final flow rate or supplemental documentation must be submitted.

Well Destruction

Abandoned wells, test holes or borings shall be destroyed or sealed to protect the ground water supply as well as to eliminate potential physical hazards. This shall be accomplished by sealing with approved non-hazardous, impervious materials after all exposed casing pumps and distribution lines are removed and the area finished to existing grade. The Board's representative should perform a site inspection and a well Decommissioning Report submitted. This report will include location of well(s), the name of the owner and reason for destruction. This report should be recorded at the Registry of Deeds and evidence of that recording submitted to the Board of Health.

Well Approval

Wells shall not be placed into use for human consumption until the Board of Health has approved the potability and quality of the water provided. Approval of the well will be based on the water meeting the water quality criteria outlined above, and on the well being shown to be able to provide a yield of 5 g.p.m. Wells which fail to meet some or all of these criteria may be approved by the Board of Health after a hearing at which a variance from these standards may be granted.

For new construction, a building permit will not be issued until the Board of Health has approved the well as a source of potable water.

Certificate of Compliance

Upon approval of both the water quality and quantity, a certificate of compliance will be issued.

Enforcement

The Board representative shall investigate a violation of this regulation or of any permit issued and may take such actions it deems necessary.

Variances

The Board may grant a variance to the application of these regulations with respect to any particular case when, in its opinion, the enforcement thereof would do manifest injustice, and the applicant has proven that the same degree of public health and environmental protection required under these regulations can be achieved without strict application of a particular provisions(s).

Variance requests shall be in writing to the Board and include all the information/reasons and proposed measures necessary to assure the protection of the public health and environment. The variance request will appear on the agenda of the next regularly scheduled meeting of the Board. Within fourteen (14) days of the next regularly scheduled meeting, the Board shall grant, notify, or deny a variance in writing and state the reasons for any denial.

Penalties

Any person who violates any provision of these regulations, or who fails to comply with any Order by the Board, for which a penalty is not otherwise provided in any of the General Laws shall upon conviction be fined not less than (\$10) ten not more than (\$5) five hundred dollars. Each days failure to comply with an Order shall constitute a separate violation.

Disclaimer

The issuance of a Private Well Certificate shall not be construed as a guarantee by the Board that the water supply system will function satisfactorily nor that the water supply will be of sufficient quality or quantity for its intended use.

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 provisions and the remainder of these regulations shall remain valid and effective. Any part of these regulations subsequently invalidated by a new state law or shall automatically be brought into conformity with the new or amended law and shall be deemed to be effective immediately.

GARDNER BOARD OF HEALTH

Dr. Joseph Forte, Chairman

Dr. Wayne Johnston, Member

Atty. Geoffrey Tobia, Member