REGULATIONS FOR PRIVATE WELLS

TOWN OF BELCHERTOWN    BOARD OF HEALTH

I. PURPOSE:

These regulations are intended to protect the public health and general welfare by ensuring that private wells are constructed in a manner which will protect the quality and quantity of the groundwater derived from private wells.

II. AUTHORITY

These regulations are adopted by the Belchertown Board of Health, as authorized by Massachusetts General Laws, Chapter 111, sections 31, 122 and 127A.

These regulations supersede all previous regulations adopted by the Board of Health pursuant to the construction of private wells.

III. DEFINITIONS

Abandoned water well: means 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 local Board of Health that use of the well has been permanently discontinued, (3) the well is a potential hazard to public health or safety and the situation cannot be corrected, (4) the well is in such a state of disrepair that its continued use is impractical, or (5) the well has the potential for transmitting contaminants into an aquifer, and the situation cannot be corrected.

Agent: Any person designated and authorized by the Board to execute these regulations. The agent shall have all the authority of the appointing Board and shall be directly responsible to the Board and under its direction and control.

Annular space: means the space between two cylindrical objects, one of which surrounds the other. For example, the space between the wall of a drillhole and a casing pipe, or between an inner and outer well casing.

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

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.

Board: The Board of Health of Belchertown, Massachusetts or its authorized agent.
Public Notice
Regulation Amendment

By the authority of MGL General Chapter 111, section 31, 122, and 127A, the Belchertown Board of Health voted and hereby orders the following changes to the Town of Belchertown’s “Regulations for Private Wells”, to be effective immediately upon publication:

Section IV A 3 is amended to read as follows:

“A plan with a specific scale, signed by a professional engineer, registered sanitarian, or professional land surveyor, showing the location of the proposed well in relation to the items listed in IV A 5 and 6.”

All other language of Section IVA3 is stricken.

By vote of the Belchertown Board of Health on this date January 8, 2014

Chairperson

Vice Chair

Member

Member

Member
Utility Right of Way: any corridor of land over which facilities such as rail roads, power lines, communication lines, or pipe lines are located.

Yield: means the quantity of water per unit of time which may flow or be pumped from a well under specified conditions.

IV. WELL CONSTRUCTION PERMIT AND APPLICATION REQUIREMENTS

The property owner or his designated representative shall obtain a permit from the Board of Health prior to the commencement of construction of a private well. Each permit shall have two parts: the Application & the Permit to Construct.

A. The Application, plus three (3) copies, signed by the property owner or his representative, shall include the following:
   1. the property owner’s name and address
   2. an attached locus map identifying the property, and giving the tax map and lot numbers, plus street address, if available
   3. a plan with a specified scale, signed by a professional engineer or registered sanitarian, showing the location of the proposed well in relation to items listed in IV.A.5 and 6 below

Note: for new wells for existing structures (replacement wells), the Board of Health may waive the requirement in section IV.A.3 that a Registered Sanitarian or Professional Engineer sign the plan. Instead the applicant may prepare the plan provided that a site visit by the Board or its agent deems it to be an acceptable location. In this circumstance the permit fee in section IV.A.7 below, will be doubled.

4. an estimate of the Required Volume of Water necessary for the anticipated uses of the property (see definitions)

5. a description and location 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:
   a. existing and proposed structures
   b. subsurface sewage disposal systems
   c. wetlands and floodplains
   d. subsurface fuel storage tanks
   e. public ways
   f. utility rights of way
   g. any other potential sources of pollution

Note: a statement is required for any of the above which do not exist

6. a description and location of waste sites, including, but not limited to landfills, stump dumps, transfer stations and hazardous waste disposal sites, and other underground storage tanks, and agricultural land uses that are within five hundred (500) feet of the well site.

7. a permit fee of $25
C. issue a conditional Water Supply Certificate with those conditions which the Board deems necessary to ensure fitness, purity, and quantity of the water derived from that private well. Said conditions may include, but not be limited to requiring treatment or additional testing of the water.

VI. WELL LOCATION REQUIREMENTS

A. Minimum Setback Requirements

<table>
<thead>
<tr>
<th>Components</th>
<th>Lateral Separation Distance (Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property line</td>
<td>10</td>
</tr>
<tr>
<td>Driveway or like right-of-way</td>
<td>10</td>
</tr>
<tr>
<td>Public roadway = edge of pavement</td>
<td>25</td>
</tr>
<tr>
<td>Road right of way</td>
<td>15</td>
</tr>
<tr>
<td>Utility right-of-way</td>
<td>100</td>
</tr>
<tr>
<td>Projection from an adjacent building</td>
<td>10</td>
</tr>
<tr>
<td>Septic tank</td>
<td>50</td>
</tr>
<tr>
<td>Leach facility</td>
<td>100</td>
</tr>
<tr>
<td>Privy</td>
<td>100</td>
</tr>
<tr>
<td>Building sewer</td>
<td>10</td>
</tr>
<tr>
<td>Wetlands</td>
<td>25</td>
</tr>
<tr>
<td>Drainage ditch or slough</td>
<td>25</td>
</tr>
<tr>
<td>Well</td>
<td>40</td>
</tr>
<tr>
<td>Underground fuel tank [excluding propane]</td>
<td>150</td>
</tr>
<tr>
<td>Landfill</td>
<td>500</td>
</tr>
<tr>
<td>Stump dump</td>
<td>100</td>
</tr>
<tr>
<td>Transfer station</td>
<td>250</td>
</tr>
</tbody>
</table>

(1) Whenever possible, private wells shall be located in areas above the one hundred year floodplain.

(2) Whenever water supply lines must cross sewer lines, both water supply lines shall be constructed of class 150 pressure pipe and shall be pressure tested to assure water tightness.

B. Additional Location Requirements

The Board reserves the right to impose lateral distance requirements from potential sources of contamination not listed above. The Board also reserves the right to increase set-back distances and to impose more stringent conditions for activities and structures listed above. All such special well location requirements shall be listed in writing, as a condition of the well construction permit.

The well shall be located as far upgradient of all potential sources of contamination as possible, given the layout of the premises.

Each private well shall be accessible for repair, maintenance, testing and inspection. The well shall be completed in a water
make every reasonable effort to secure the well in such a way as
to prevent either tampering with the well or the introduction of
foreign material into the well.

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 shall be conveyed in clean sanitary containers or water
lines and shall be chlorinated. Water from wetlands, swamps,
small lakes and other similar surface features shall not be used.

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.

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

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.

B. Well Casing

Private water supply wells shall be constructed using either steel
or thermoplastic well 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.

All casing used in the construction of private water supply wells
shall be free of pits, breaks, gouges, deep scratches, and other
defects. Upon completion of the installation procedure, the entire
length of the casing above the intake shall be watertight.

C. Well Screen

A well screen is necessary for all drilled wells that are
completed in unconsolidated formations. Wells completed in
bedrock do not require a screen unless the bedrock is brittle in
nature or has a potential for collapse. The well screen aperture
openings, screen length, and diameter shall not limit the
aquifers' water yielding characteristics while preventing access
of soil particles.

D. Grouting and Sealing
WATER USAGE ESTIMATES

<table>
<thead>
<tr>
<th>type of establishment</th>
<th>gallons per person per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boarding school/colleges</td>
<td>65</td>
</tr>
<tr>
<td>Nursing homes</td>
<td>100</td>
</tr>
<tr>
<td>School, without cafeteria or gym</td>
<td>10</td>
</tr>
<tr>
<td>School, with cafeteria but no gym</td>
<td>15</td>
</tr>
<tr>
<td>School, with cafeteria and gym</td>
<td>20</td>
</tr>
<tr>
<td>Swimming pool</td>
<td>10</td>
</tr>
<tr>
<td>Camp, resident, resident with washroom &amp; toilets</td>
<td>25</td>
</tr>
<tr>
<td>Camp, resident with mess hall</td>
<td>10</td>
</tr>
<tr>
<td>Campground showers and toilets per site</td>
<td>75</td>
</tr>
<tr>
<td>Gym, per spectator</td>
<td>3</td>
</tr>
<tr>
<td>Gym, per participant</td>
<td>25</td>
</tr>
<tr>
<td>Theater, Auditorium</td>
<td>3</td>
</tr>
<tr>
<td>Public Park, toilets only</td>
<td>5</td>
</tr>
<tr>
<td>Public Park, bathhouse and showers</td>
<td>10</td>
</tr>
<tr>
<td>Factory or industrial plant, without cafeteria</td>
<td>15</td>
</tr>
<tr>
<td>Factory or industrial plant, with a cafeteria</td>
<td>20</td>
</tr>
<tr>
<td>Work or Construction Camp</td>
<td>50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>gallons per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tennis club per court</td>
</tr>
<tr>
<td>Bowling alley per alley</td>
</tr>
<tr>
<td>Country club dining room per seat</td>
</tr>
<tr>
<td>Country club snack bar or lunch room per seat</td>
</tr>
<tr>
<td>Country club lockers and showers per locker</td>
</tr>
<tr>
<td>Church per seat</td>
</tr>
<tr>
<td>Church kitchen per person at capacity</td>
</tr>
<tr>
<td>Mobil Home Park per site</td>
</tr>
<tr>
<td>Office building per 1000 square feet</td>
</tr>
<tr>
<td>Dry Good Store per 100 square feet</td>
</tr>
<tr>
<td>Drive in per stall</td>
</tr>
<tr>
<td>Hospital per bed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>gallons per seat or chair per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restaurant, lounge, or tavern</td>
</tr>
<tr>
<td>Restaurant, throughway service area</td>
</tr>
<tr>
<td>Restaurant, kitchen flow</td>
</tr>
<tr>
<td>Barber shop/ Beauty salon</td>
</tr>
</tbody>
</table>

B. Pumping Test

The pumping test may be conducted at whatever rate is desired as long as the volume required for a 24 hr. period is removed from the well. At 1 hr. and again at 24 hrs following the pumping of the well, the water level must be measured and recorded. If the water levels between the 1 and 24 hr. levels are not within 1 foot of each other, then a third water level measurement will be taken after a second 24 hr. period. If the well fails to yield the
After the pump is connected and the system is operating, the well shall be disinfected with chlorine, prior to using it as a drinking water supply. The initial chlorine concentration shall be 100 mg/L throughout the entire water column. The disinfectant solution shall remain, undisturbed, in the well for a minimum of twelve (12) hours prior to flushing it from the system.

The pump contractor shall also disinfect the entire water supply system after any maintenance or repair work is done on the pump.

X. DECOMMISSIONING REQUIREMENTS

Abandoned wells, test holes, and borings shall be decommissioned so as to prevent the well, including the annular space outside the casing, from channeling water vertically or otherwise.

The property owner shall be responsible for ensuring that all abandoned wells and test holes or borings are properly plugged by a registered well driller. They shall be completely filled with a grout so as to prevent contamination of a lower aquifer and as protection against personal injury. Notification must be sent to the Board of Health.

In the case of new construction, all test holes and borings shall be plugged before the well contractor completes work at the site.

XI. ENFORCEMENT

The Board shall investigate violations of these regulations and/or violations of any Water Supply Certificate conditions, and may take such actions as the Board deems necessary for the protection of the public health and the enforcement of these regulations.

If an investigation reveals a violation of these regulations, or the Water Supply Certificate conditions, the Board shall order the private well owner to comply with the violated provision(s).

These orders shall be in writing and served in the following manner: (a) personally, by any person authorized to serve civil process, or (b) by any person authorized to serve civic process by leaving a copy of the order at the well owner's last and usual place of abode, or (c) by sending the well owner a copy of the order by registered or certified mail, return receipt requested, if the well owner is within the Commonwealth, or (d) if the well owner's last and usual place of abode is unknown or outside the Commonwealth, by posting a copy of the order in a conspicuous place on or about the premises and by advertising it for at least three out of five days in one or more newspapers of general circulation within the municipality wherein the private well is situated.

XII. HEARING

The private well owner to whom any order has been served may request a hearing before the Board by filing with the Board within
any granting 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 Board of Health.

Any variance may be subject to such qualification, revocation,
suspension, condition or expiration as is provided in these
regulations or as the Board expresses in its grant of the
variance. A variance may otherwise be revoked, modified or
suspended, in whole or in part, only after the holder thereof has
been notified in writing and has been given an opportunity to be
heard, pursuant to Section XI of these regulations.

XVI. SEVERABILITY

If any specific portion of these regulations shall be declared
invalid for any reason whatsoever, that decision shall not affect
any other portion of these regulations, which shall remain in full
force and effect, and to this end the provisions of these
regulations are hereby declared severable.

XVII. EMERGENCIES

No provision of these regulations shall be construed as a
limitation on the emergency powers of the Belchertown Board of
Health or its officers as provided for by law.

XVIII. EFFECTIVE DATE

These regulations were adopted by vote of the Belchertown,
Massachusetts Board of Health, at their regularly scheduled
meeting held on February 7, 1994 and are to be in full force
and effect upon publication of a summary in one or more newspapers
of general circulation within Belchertown. Copies of these
regulations shall be on file in the Board of Health Office.

These regulations or any portions thereof may be amended,
supplemented or repealed from time to time by the Board, with
notice as provided by law, on its own motion or by petition.

XIV. DISCLAIMER

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

1. THERE ARE NO OTHER POTENTIAL SOURCES OF POLLUTION OBSERVED WITHIN 200 FT. OF PROPOSED WELL.
2. THERE ARE NO WASTE SITES OBSERVED WITHIN 500 FT. OF PROPOSED WELL.
3. THE WELL IS NOT LOCATED IN THE 100 YEAR FLOOD ZONE.

LEGEND

EXISTING CONTOURS
PROPOSED CONTOURS
UTILITY POLE
TEST PIT LOCATION AND NUMBER
IRON PIN FOUND