

Town of Northborough Well Regulations

Adopted by the Northborough Board of Health on 2/11/09.

1.0 Purpose and Authority

These regulations are intended to promote the public health and general welfare by ensuring that wells are constructed, maintained or decommissioned in a manner which will protect the quality of the groundwater derived from wells. Therefore, the property owner or designated representative of an owner proposing to construct or deconstruct a well shall obtain a permit therefor from the Board of Health. These regulations are adopted by the Town of Northborough as authorized by Chapter 111, Section 31, M.G.L.

1.1 Definitions

As used in these regulations, the following terms shall be defined and interpreted as follows:

- (1) Agent: The Northborough Board of Health Agent, as designated by Chapter 111, Section 27A, the Northborough Board of Health, lab staff from a State certified water lab or other individuals designated as agents by the Northborough Board of Health.
- (2) Applicant: Any person who intends to have a private well constructed or deconstructed.
- (3) 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.
- (4) Bedrock: The solid rock that underlies all soil, sand, clay, gravel, and loose material on the earth's surface.
- (5) Board: The Board of Health of the Town of Northborough, Massachusetts or its authorized agent.
- (6) Business of Digging or Drilling: A person who charges a fee for digging or drilling a well, or a person who advertises for hire the availability to dig or drill wells within the Commonwealth of Massachusetts.
- (7) Casing: Impervious durable pipe placed in a boring to prevent the walls from caving in and to serve as a vertical conduit for water in a well.
- (8) Certified Laboratory: Any laboratory currently certified by the Massachusetts Department of Environmental Protection for drinking water analysis. A laboratory holding provisional certification shall also qualify.
- (9) Deep Well: Any well with a total depth of greater than 100 feet.

- (10) Drilled Well: Any well that is drilled into bedrock with a casing that is sealed to the bedrock.
- (11) Driven Well: Any well utilizing a drive-well point which is driven into the ground.
- (12) Dug Well: Any excavation dug by man or machine which is used to provide water for irrigation or any other purpose.
- (13) Irrigation Well: A well which is not connected to a domestic water supply line used or potentially used for human consumption. An irrigation well requires a water test in compliance with the Northborough Board of Health Regulations. There shall be no plumbing connected to the house. It must be identified by a firmly attached yellow metal tag having the shape of a four-inch equilateral triangle bearing the legend WATER UNSAFE in letters not less than 7/16 inches in height.
- (14) Non-essential Private Well – Any well not used as a potable water source, including but not limited to irrigation wells.
- (15) Person: Means any agency or political subdivision of the federal government or state; any state, public or private corporation or authority; any interstate body, foreign nation, individual, trust, firm, joint stock company, partnership, associations or other entity; any officer, employee or agent of such person; and any group of persons.
- (16) Point Well: Any well utilizing a drive-well point which is driven into the ground.
- (17) Potable Water: Water that is satisfactory for drinking and for culinary and domestic purposes. Chemical and bacteriological analysis shall meet the standards set forth by the Massachusetts Department of Environmental Protection public water supply division regulations for potable water.
- (18) Private Well: Any dug, driven, or drilled hole, with a depth greater than its largest surface diameter developed to supply water intended and/or used for human consumption and that will not serve either a number of service connections or a number of individuals sufficient to qualify as a public water system as defined in 310 CMR 22.00.
- (19) Pumps and Pumping Equipment: Any equipment or materials used or intended for use in withdrawing or obtaining groundwater, including, without limitation, pumps, seals and tanks, together with fittings and controls.
- (20) Registered Well Driller: Any person registered with the Department of Conservation and Recreation/Office of Water Resources to dig or drill wells in the Commonwealth of Massachusetts.

- (21) Shallow Well: Any well with a total depth of less than 100 feet including but not limited to point wells, dug wells, and driven wells.
- (22) Static Water Level: The level of water in a well under non-pumping conditions.
- (23) Well: An excavation or opening into the ground made by digging, boring, drilling, driving or other methods for the purpose of providing a water supply.
- (24) Well Seal: An approved arrangement or device used to cap a well or to establish and maintain a separation between the casing or curbing of a well and the piping or equipment installed therein, the purpose and function of which is to prevent pollutants from entering the well or the upper terminal.

Unless the context requires otherwise, words not herein defined, shall have the same meaning as given in the applicable regulations of the Department of Environmental Protection (DEP) and the Department of Conservation and Recreation (DCR).

2.0 Requirements for Private Wells

- (1) No well installed after the effective date of these regulations shall be deemed a source of water supply unless it is constructed in accordance with these regulations.
- (2) No well shall be destroyed unless done in accordance with these regulations.
- (3) For each well constructed after the effective dates of these regulations, there shall be:
 - (a) a well construction permit application;
 - (b) a well construction permit;
 - (c) a water quality analysis;
 - (d) a well driller's well completion report.
- (4) For each well destroyed after the effective date of these regulations, there shall be:
 - (a) a well destruction permit application;
 - (b) a statement of well abandonment from the owner;
 - (c) a well destruction permit;
 - (d) a well driller's report of destruction.

3.0 Well Construction or Destruction Permit

- (1) The property owner or his designated representative shall obtain a permit from the Board of Health or its Agent prior to the commencement of construction and/or destruction of a private well, non-essential private well, irrigation well, monitoring well, drilled holes, bore holes, or other holes drilled by mechanical means greater than ten (10) feet, and any other structure that is considered a well.
- (2) No person shall engage in the business of constructing or destroying a well within the Town of Northborough under these regulations unless registered as a well driller with the Water Resources Commission, pursuant to 313 CMR 3.00.
- (3) Each permit application to construct a well shall include the following:
 - a. An application form
 - b. The property owner's name and address
 - c. The well driller's name and proof of valid state registration
 - d. A general location of the proposed well to include the location of at least one road intersection for reference.
 - e. A sketch of the expected construction of the well to include an approximation of the expected well depth.
 - f. A description of all known prior and current land uses within four hundred (400) 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 ways
 - (5) Utility rights-of-way
 - (6) Any other potential sources of pollution

The Board may choose to require additional information pertaining to, but not limited to, all of the above, including the location of landfills, waste sites, and agricultural land uses that are within 500-1000 feet of the well site.
 - g. A well permit installation fee of \$100.00 to the Town of Northborough Board of Health. (Note: No fee is required for decommissioning a well, installation of a monitoring well or general pump maintenance).
 - h. All well permit applications are subject to the review of the Town of Northborough Water Department prior to issuance.
 - i. All irrigation wells must have a clearly visible sign notifying the public that there is an irrigation well in use.
- (4) The permit shall be on site at all times that work is taking place. Each permit shall expire three (3) years from the date of issuance unless revoked for cause. Permits may be extended for one additional one (1) year period provided that a written request is received by the Board of Health prior to the three year

expiration date. No additional fee is required for a permit extension, provided that there is no change in the plans for the proposed well.

- (5) Well Construction permits are not transferable. Acquiring any additional necessary permit (e.g. plumbing and electrical permits, etc) shall be the responsibility of the applicant.
- (6) For emergency repair, alteration, or replacement of an existing well the Board of Health or its Agent may waive one or more requirements of these regulations for dwellings which were in existence prior to the effective date of these regulations.

4.0 Well Location and Use Requirements

- (1) In locating a well, the applicant shall identify all potential sources of contamination which exist or are proposed within five hundred (500) feet. When possible, the well shall be located up gradient of all potential sources of contamination and shall be as far removed from potential sources of contamination as possible, given the layout of the premises.
- (2) Each private well shall be accessible for repair, maintenance, testing, and inspection. The well shall be completed in a water bearing formation that will produce the desired quantity of water under normal operating conditions.
- (3) The following minimum lateral/circumferential distances from potential sources of contamination shall apply:

Source of Contamination	Minimum Distance (Ft)
Leaching facility (310 CMR 15.000)	100'
Septic Tank	50'
Sewer line/Force Main	50'
Property line	35'
Public or Private way, Common drive, Roadway easement, parking lot	50'
Active or Closed Landfill	400'
Hazardous Waste Spill Site	400'
Any type of surface water (wetland, bordering vegetated. wetland, Surface water of any type)	100'
Swimming pool, in-ground Pool or above ground	25'
Slab or Full Foundation (Building)	10'

- (4) A suction line or supply line shall be located a minimum of 10' from a building sewer constructed of durable corrosion resistant material with watertight joints, or 50' from a building sewer constructed of any other type of pipe; 50' from a septic tank; 100' from a leaching field; and 100' from a privy.
- (5) Water supply lines shall be installed at least 10' from and 18" above any sewer line. Whenever water supply lines cross sewer lines, both pipes shall

be constructed of class 150 pressure pipe and shall be pressure tested to assure water tightness.

- (6) The Board reserves the right to impose minimum lateral distance requirements from other potential sources of contamination not listed above. All such special well location requirements shall be listed, in writing, as a condition of the well construction permit.

5.0 Well Construction Standards

- (1) The annular space 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 shallow, subsurface waters.
- (2) The well casing shall be capped or covered with a sanitary well seal. Casings 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 opening shall be of an approved type, complete with screening.
- (3) When well screens are used, the screen length and opening size should be selected to ensure that the water supply will be free from silts and sands and other suspended solids.
- (4) Irrigation wells shall have no physical connection to any domestic water supply plumbing lines or pump equipment (i.e. no cross connections).

6.0 Water Sampling Procedure

All private wells and non-essential private wells shall be disinfected following construction, rehabilitation, and well or pump repair before the well is placed into service. Any time a well is constructed, opened, repaired, deepened or allowed to be subject to contamination, it shall be disinfected, using a suitable amount of chlorine or similar product. The well shall be pumped to waste (not to the septic system) until the water is free of chlorine.

- (1) The Northborough Board of Health, Massachusetts Department of Environmental Protection Certified Laboratories, or other persons approved by the Board of Health shall collect water samples immediately following construction or rehabilitation and disinfection of a well. A representative sample for laboratory analysis shall be collected at pump discharge or from a tap in the pump discharge line. Chemical and bacteriological analysis shall meet the standards set forth by the Massachusetts Department of Environmental Protection Public Water Supply Division regulations for potable water.
- (2) The sample(s) shall be analyzed for the following parameters at a minimum: Total Coliform, fecal coliform/E.Coli, arsenic, lead,

sodium, iron, manganese, copper, magnesium, color, sulfate, turbidity, alkalinity, chlorine, chloride, hardness, ammonia, nitrate, nitrite, pH, conductivity, odor and potassium. All analyses shall be performed in accordance with U.S. EPA methods for drinking water analysis.

- (3) The lab shall be required to notify the Northborough Board of Health should the sample be received with a broken custody seal.

7.0 Water Quality Requirements

- (1) All analytical results shall be reviewed by the Northborough Board of Health or its Agent and an assessment of the suitability of that well for drinking water will be made. The Northborough Board of Health or its Agent will adhere to the current and applicable drinking water standards as detailed by the U.S. EPA and the Massachusetts Department of Environmental Protection (DEP).
- (2) The water sample(s) shall be analyzed by a laboratory certified to perform drinking water analysis by the DEP for each parameter analyzed.
- (3) The Northborough Board of Health may require that additional chemical analysis be performed on the well water. Any such additional requirement shall specify which chemical constituents or chemical fraction shall be tested for.
- (4) No result shall exceed the current and applicable drinking water standards for a public water supply, as detailed by the U.S. EPA and/or DEP (40 CFR 141 and 310 CMR 22). Coliform results shall be zero colonies per 100 mL of sample or upon a positive result be followed by two successive zero coliform results. These samples must be drawn a minimum of 24 hours apart. When the results indicate a potential health hazard (e.g., possible gasoline contamination) the Northborough Board of Health or its Agent may disapprove the well for use as a water supply. Remedial treatment equipment may be required to provide a satisfactory supply.
- (5) The Northborough Board of Health may require the collection and submittal of water quality testing for any property when in the opinion of the Board the water supply quality is suspect or potentially compromised.

8.0 Well Completion Requirements

- (1) Within 30 days after the completion of the construction of any well, the well driller/digger shall submit to the Northborough Board of Health office a report containing the following information:
 - a. The name of the owner of the well;
 - b. The address of the property serviced and/or the lot number as assigned by the Assessors' office;
 - c. The depth, size and method of construction of the well;
 - d. The static water level;

- e. The yield of the well after pumping;
 - f. The well driller's log information;
- (2) The well driller's report shall be signed by an authorized representative and shall include a statement of compliance with all requirements of these regulations.

9.0 Well Destruction Requirements

- (1) A well that is abandoned shall be destroyed to protect the ground water and to eliminate potential physical hazards. Wells shall be sealed with non-hazardous, impervious materials which shall be permanently in place. All casing materials, pumping equipment, and distribution lines shall be removed. The excavation shall be returned to the current existing grade of the surrounding land. A record of abandonment shall be kept on file in the office of the Board.
- (2) 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.
- (3) The property owner shall be responsible for ensuring that all abandoned wells and test holes or borings associated with private well installations are properly plugged in accordance with the best management practices. Only registered well drillers may plug abandoned wells, test holes, and borings.
- (4) The following information shall be submitted with each well destruction application, prior to the issuance of a permit:
- (e) The specific location of the well to be destroyed;
 - (f) The design and construction of the well to be destroyed;
 - (g) A written statement from the owner that the well is abandoned;

Within 30 days after the destruction of any well, the well driller shall submit to the Northborough Board of Health a report containing the following:

- (a) The name of the owner of the well;
 - (b) The address of the property served;
 - (c) Method of sealing, including materials used;
 - (d) Person or persons sealing the well and date of the sealing of the well
- (5) The well driller's report shall be signed by an authorized representative and shall include a statement of compliance with all requirements of these regulations.

10.0 Variances

- (1) Variances may be granted only as follows: The Board of Health may vary 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 provision(s).

- (2) Variance requests shall be in writing to the Board of Health. After a public hearing, the Board of Health may grant, modify, or deny a variance in writing.

11.0 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. Any part of these regulations subsequently invalidated by a new state law or modification of any existing state law shall, by an amendment of the regulations, be brought into conformity with the new or amended law. However, to the extent permitted by law, the revision necessary to comply with state law shall be deemed to be effective immediately, and the regulations shall be applied and enforced so as to comply with state law.

12.0 Disclaimer

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

13.0 Enforcement

- (1) The Board of Health or its agent shall enforce these regulations, and shall investigate violations of these regulations or of any permit issued and may take such actions as it may deem necessary for the protection of the public health and to restrain violations of these regulations.
- (2) Whosoever violates these regulations shall be punished by a fine of not more than \$500.00 dollars to, and for the use of, the Town of Northborough. Each day of violation shall be considered a separate violation.
- (3) These regulations may also be enforced by the non-criminal disposition method pursuant to MGL Chapter 40, Section 21D. The penalty for violation shall be \$300. Each day of violation shall be considered a separate offense.

These regulations become effective February 12, 2009.

Glenn French
Chairman

Deirdre O'Connor
Member

Dilip Jain
Member

Dated: February 11, 2009
Board of Health
Northborough, MA 01532